# BALLISTIC FINDINGS IN THE JOHN F. KENNEDY AUTOPSY PHOTOGRAPHS

**Conspiracy and cover-up in the assassination of JFK is proven by this study of the autopsy photographs showing four shots from the right front and none from the rear. Let the truth be known by all.**

**By Richard Tobias**

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# BALLISTIC FINDINGS IN THE JFK AUTOPSY PHOTOS

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## CONCLUSIONS OF THE STUDY

**This study of the autopsy photos finds that JFK was shot FOUR times from the right front by at least three different guns none of which were fired from the Sixth Floor School Book Depository. Governor Connally was shot with one bullet, which came from the Sixth Floor. Photos are labeled at the end of this document.**

## BRIEF JFK ASSASSINATION OVERVIEW

**On November 22, 1963, President Kennedy was shot multiple times and killed by persons unknown. According to the fiction of the Warren Report:**

- **Oswald for reasons unknown, acting alone fired three shots from the Sixth Floor Schoolbook Depository above and behind JFK.**
- **The apparent first shot is the impossible MAGIC bullet causing seven wounds, hitting JFK in the back, exiting the neck, hitting Connally in the back, exiting his chest, hitting his wrist exiting and entering his leg. This impossible bullet then fell out of the leg wound and was found almost undamaged at Parkland Hospital.**
- **The apparent second shot missed the car hitting a curbstone causing a wound, which was photographed, to James Tague standing near the overpass.**
- **The apparent third shot caused the fatal head wound to JFK by entering "the skull above and to the right of the occipital protuberance [the bony point at the back of the head]" breaking into fragments, the larger fragment exiting the right temple and a smaller exiting the right parietal area, with two fragments remaining in the skull. The exiting fragments would have to cause the windshield damage and account for all fragments recovered in the car.**

**The HOUSE SELECT COMMITTEE ON ASSASSINATIONS (HSCA): Accepted the Warren Report's findings of the three shots. However they decided, based upon acoustical evidence, there was a FOURTH shot from the right front picket fence area which did not hit JFK. Thus Oswald did not act alone and a conspiracy probably existed. [Note that they test fired a .45 cal. bullet from the right front knoll area during re-enactments.]**

- **They also found that the autopsy doctors had failed to accurately report the wounds as they appear in the autopsy photos. Oswald's 3rd shot was moved to enter the skull in the crown area about four inches above of the occipital protuberance as was done by the Clark panel in 1968.**

- After entering the crown area the bullet divided into perfectly round fragments causing round exit holes. The largest fragment exited the parietal area above the right ear and the smaller exited the right temple hairline which is opposite of the Warren Report. This finding is due to autopsy photos F3 and F8. [Note bullets do not fragment into perfectly round parts nor do they cause round exit holes in the skull's skin.] No perfectly round fragments were recovered from the car.

The locations of the fragment wounds are the same, but the fragment wound sizes are reversed. How can the wounds move? Two fragments remained within the skull. The exiting fragments have to be the fragments that were found in the car and damaged the windshield; otherwise another bullet was fired.

## THE OFFICIAL HEAD WOUNDS

From these reports the head has four wounds to be investigated:

#1. Crown area 4 inches above the occipital protuberance.
#2. Right of the occipital protuberance.
#3. Right parietal.
#4. Right temple.

These four wound locations are critical to understanding what has occurred during the cover-up of the head wounds. The neck and back wounds will be studied first since it was the first shot but first a brief review of the Parkland evidence.

PARKLAND EVIDENCE: According to the Parkland doctors the neck wound was a small round smooth edge entry wound; thus no impossible MAGIC bullet occurred. The back wound was not seen. The Parkland doctors most often report a large egg shape right occipital wound of EXIT about 2-3 inches. Notice that this is the general location of the Warren Report's entry wound to the right of the occipital protuberance #2 above. Dr. Crenshaw reports seeing a right temple hairline entry wound. Notice that this corresponds with location of an alleged fragment wound #4 above. JFK's press secretary points to the right temple/parietal area to indicate the head shot just hours after the death. Notice that this location also corresponds with one or both alleged fragment wounds #3 and #4. Dr. Jenkins' Warren Commission testimony, March, 1964, "... I thought there was a wound on the left temple area, right at the hairline and right above the zygomatic process." Notice that had he said right instead of left; this location would correspond with the alleged fragment wound #3 or #4 above. Did the reporter accurately record his testimony or did he simply confuse left and right four months after the shooting? Dr. McClelland wrote in his Commission Exhibit 392, "The cause of death was due to ... a gunshot wound of the left temple." Doctors sometimes confuse left and right but not the existence of a wound at a body part location. It is possible that the reports of a left temple entry wound are falsely reported and the wound is actually located on the right side. In either case an entry wound to the temple area did exist

KILDUFF

**as reported by the witnesses, which would be #3 or #4 above or a new wound on the left side of the head. Left profile photo F4 does not show a wound.**

## PURPOSE

**The JFK assassination medical evidence is so confused and contaminated with false and deceptive disinformation that the only way to truly know the truth of JFK's death would be to exhume the body for a proper autopsy by objective pathologists not under government control and filmed in a public setting with many neutral witnesses. Since this will not occur any time soon, one must conduct a detailed study of the autopsy photos.**

**Using actual 8x10 copies from several different sources and published as the "Fox" set an objective study of the public autopsy photos was performed. This requires the assumption that the photos are true and correct and then simply look for ballistic wounds within the photos. Any wounds found from any direction must be confirmed in other photos but not all photos. Any evidence of photo manipulation will be noted because it indicates government cover-up but it does not disprove the existence of a wound. In fact a faked or tampered with photo will often support a finding of the evidence of the bullet wounds. The fact that some photos appear to be taken at different times and show different conditions of the body does not matter to the determination of ballistic wounds within any photo. It is the correlation between the several photos that demonstrates the wounds and the path of the bullets. In this study the photos are considered the best evidence of the wounds taking priority over all witnesses statements and the official autopsy report. All of the wounds identified in this study are supported by at least some of the witness reports and first day evidence.**

**To understand JFK's wounds one must know what bullet wounds look like and the ballistics that caused them and photography.**

## BASIC BALLISTICS

**In the case of a high-powered rifle, high velocity bullets, the external appearance of the entrance wound does not materially differ from that of a gunshot wound inflicted with a handgun or ordinary rifle, low velocity bullets. Such entry wounds are generally round with smooth edges, about the same size as the bullet and a compressing margin abrasion ring is present. A compression ring is caused when the bullet passes though the skin and the skin is crushed and its edges scrape against the bullet. Soft tissues collapse into a vast temporary cavity produced in the wake of the high velocity bullet. The exception occurs in skull wounds. The skull is simply a ridged closed container filled with water. The skull including the base is often shattered by the impact and then again by the pressure wave caused by velocity creating a vast temporary cavity. According to Wilber the internal cranial pressure is approximately equal to the square of the velocity of the bullet. [According to Dr. Di Maio it can be 200 atmospheres.] In addition bullet velocity must be a minimum of 2,000 feet per second to cause the skull to explode. This internal cranial pressure (4,000,000 pounds per square inch) can cause the skull to explode causing skin rips [lacerations] at the entry wound. Thus one does not expect to see an intact round hole of entry but semicircles that become round holes**

when the lacerated skin edges are brought together. The wound track may be 3 or 4 inches in diameter. The size of the temporary cavity depends on the kinetic energy of the bullet, $E_{kin} = (m/2) V^2$ where V = velocity and m = mass (bullet weight).

A high velocity bullet will make an extremely large temporary cavity creating gaping lacerations in the tissue and usually a large ragged exit wound. Figure X-28, near the end of this document, is a man shot in the right temple from a 30-30 rifle, from a distance of about 60 ft. The wound of entrance is marked. This is very similar to JFK's wounds. The skin lacerations ALWAYS point to the round entry wound with a circumferential marginal abrasion [compression ring] or an irregular shaped exit wound. Skin tear laceration wounds from distant high velocity bullets are a result of the intense increase in pressure within the skull due to the temporary cavity of the bullet.

## THE STUDY

Ballistic findings on the JFK autopsy photos, as labeled in High Treason II by H. Livingstone, and the text book Medical Legal Investigation of Death, 2ed, and 3ed, by Spitz and Fisher and many other sources, Wilber, Groden, Marrs, Lifton, Twyman, Wecht, Fetzer, etc. The lack of direct access to the original photos and enlargements and close-ups of the wound areas limit this study. Direct access to the original photos in the National Archives could alter the findings of this study but they probably would confirm the results of this study.

## THE NECK [FIRST] BULLET WOUND

Neck wound High Treason II, photos F1 Stare-of death: Photo F1 shows JFK's face and neck from above and slightly to his right side. The neck wound was caused by the first bullet to hit JFK [about Z film 210+-] and according to the Parkland Doctors it was a round entry wound of 4 to 7 mm. Because the photo has no reference object of known size near the wound actual scale cannot be determined. An assumption must be made that JFK's eye cornea was the average of about 1cm diameter then estimates of wound size can be made by measuring the cornea in the photo and calculating scale. Emergency tracheotomies tend to be long so the 2" length and size of the trach wound does not matter to ballistic wound seen in the photo. I do not see any sign of postmortem wound alteration because the ballistic wound is visible thus the photo shows the true unaltered wound. The neck bullet wound at the skin is clearly seen in photo F1 at the mid lower skin incision as a slight elongated "U" shape about 10 to 14 mm long. Since dia=cir/pi, a 6mm dia. circle would have an 18.8 mm circumference. Part of the bullet wound is also seen in the upper skin incision about 5 to 10 mm. Maximum wound circumference of 24 mm means a circle of 7.6 mm. It appears that if the skin were properly closed the bullet wound would be about 6mm and round or oval but this is educated speculation based upon difficult measurements from the photo. The photo confirms the Parkland Doctors estimate of wound size, 4 to 7 mm. By size alone this suggests an entry wound. The photo only suggests an entry wound skin margin as the actual skin edge thickness is not seen and the skin edges are rounded inward towards the wound as expected in this area of the neck. The photos used in this study are not

**clear enough for a positive determination of direction based upon skin margin. An enlargement of the original photo would be useful. Exit wounds very greatly in size and shape tending to be large, generally about twice the actual bullet diameter for moderate to low velocity, with jagged non-compressed skin margins and are often star shaped or irregular. [See the goatskin test Warren Com. Exhibit 850, WC page 846 Volume 17.] Since most medium and low velocity exit wounds are about twice the size of the entry wound a 6mm wound could not be an exit wound. It is noted that, no exit wound signs are seen in the skin margins of photo F1 and the wound was small, 4 to 7 mm. The hole in the trachea is seen at the upper midline skin edge about 1 inch above the suprasternal notch. Note this is above the normal tie knot level. The trachea wound appears about 1 cm round with jagged edges but this would be due to surgical enlargement for the insertion of the trachea tube. This photo positively identifies the location of the neck wound above the necktie. [Note that the bullet did not hit the shirt and tie. The cuts in the clothing were made by a scalpel in order to remove the tie clothing, Cover-up by Shaw p.64 and other sources.] The Parkland Doctors have described the neck wound as having a circumferentially abraded margin about 6mm dia. High velocity exit wounds can be very large 3-6 inches. Entry wounds are generally about the same size and shape of the bullet at the time of impact. [Usually round and 1mm smaller than the bullet dia. due to elasticity of the skin.] Some {Spitz 3ed.} have claimed that this abraded margin was caused by the bullet exiting and passing though the tie thus confusing the Parkland Doctors. This is disinformation and cover-up since the bullet did not hit the tie, the circumferential entry abrasion described by the Parkland Doctors could only have been caused by an entry wound.**

**No determination of direction of the neck wound bullet can be made from the photo F1 other than: a neck entry wound is suggested and no exit wound signs are present. However the back wound in photos F5 positively shows an exit wound, thus a frontal entry wound must exist in the neck in accordance with the Parkland doctors.**

## THE BACK WOUND

**The Back wound photos F5 shows an exit wound measuring 15 x 8 mm when using a photo printed dark enough to read the scale in the photo. The back wound is the larger dark mark closest to the head. [Note the lower exit wound in the goatskin test Warren Com. Exhibit 850 is about the same shape but smaller than the F5 back wound.] The lower small round black mark in photos F5 is about 7mm dia. about the level of T3 but it is not a wound according to the observed photos in this study. The black box on the ruler is 15 mm, which is the same size as the large wound, also note the size of the doctor's fingers in comparison to the wound and black box. Because the body is not perpendicular to the camera there is some photo distortion in scale [2mm] between the wound end of the ruler and the black box end. The ruler is a 30 cm [about 12 inches] scale with extra non-scale margins at the ends. It is 3cm wide or about 1 $^{1}/_{4}$ inch. The autopsy report, in direct conflict with the photo, says this back wound is a 7x4mm oval located 14cm from the tip of the right acromion process and 14cm below the tip of the right mastoid process. The pathologists appear to have simply reduced the wound size by half but they**

correctly described the location of the large wound in spite of the use of atypical measuring points. Given that the ruler is over the spinal column, which is the normal measuring point in F3 the use of atypical measuring points for the final report is strange. It truly appears that they used the photo F3 to obtain the final measurements instead of the body but this is speculation. NOTE: The pathologists claim to have probed the wound with a finger however none of them have fingers small enough to fit in a 7x4 mm hole but they would barely fit in the actual photographed 15x8 mm exit hole.

The upper skin margin is seen in the photo F5 and no sign of a compression entry abrasion is seen. In fact the full thickness of the skin edge can be seen and it is not compressed. Deeper tissue is seen within the wound. A size of 15x8 mm means this must be an exit wound about twice the size of the bullet dia. [See the goatskin test Warren Com. Exhibit 850 lower exit wound.] The oval shape also indicates an exit wound of a deformed mushroomed shaped low velocity bullet. By size, shape and visible skin margin without compression this wound must be an exit wound. If this is an exit wound the Parkland doctors were correct and the neck wound was the entry wound.

The lower round black spot about 7mm dia., if truly present, is probably a blood clot. It is seen about an inch below the larger actual wound about the spinal level of T3, which corresponds well with the bullet hole in the shirt and coat but so does the large wound given loose fitting cloths with suit shoulder pads and sitting with a raised right arm. Photo expert, Jack White thinks that this smaller spot was created in a darkroom. If a natural blood clot, it should have been removed prior to taking the photo to avoid confusion. This small round black object does not have any visible skin margins and appears to be an object on top of the skin. No internal tissue is seen within it. On some photos a white spot is seen within it indicating that the white is skin within the clot on the surface of the skin. It does not look like a bullet wound but better photos could prove otherwise. It does appear like a dark room creation to confuse the evidence but it could also be a naturally occurring blood clot.

Appears blood clot

[illegible]

[Robert Groden, who has seen the original photo, claims that this is an entry wound with a compression entry abrasion seen in the original photo. If it is a bullet wound then by size, shape and location it is an entry but it could not have exited by the front neck wound and it should have been found within the chest; and this would be a fifth bullet which is not supported by existing photo and medical evidence and the clothing.]

JFK has one and only one hole in his shirt and coat thus only one back wound can exist and it is a large exit wound. The hole in the cloths is about 6 inches below the top of the collar and two inches to the right of the midline seam. The hole measures 15 mm in the coat and 10 mm in the shirt. Because of the way the clothing was handled the direction of fiber bend at the hole site cannot be used to determine bullet direction. CPR was done on JFK while he was lying on top of his clothing on a padded stretcher and multiple persons handled the cloths before they were examined. Under such conditions any outward fiber bend caused by an exiting bullet would have been replaced by a flat or an inward fiber bend due to the CPR. The clothing hole size indicates an exit wound. The back wound is an exit of the

the cloths before they were examined. Under such conditions any outward fiber bend caused by an exiting bullet would have been replaced by a flat or an inward fiber bend due to the CPR. The clothing hole size indicates an exit wound. The back wound is an exit of the neck entry wound in seen in photo F1 and described by the Parkland doctors. This back exit wound is about 5 cm to the right of C7-T1, [under the right mastoid], on the photo. A neck entry about 1 inch above the suprasternal notch with an exit 5 cm to the right of C7-T1 is a horizontal or slightly downward and left to right path through the body. The autopsy report states the apex (supra-clavicular portion) of the right pleural cavity suffered a contusion but the lung was not punctured by the bullet. According to Fisher and Spitz 2ED, p 252, "X ray films taken during the autopsy of President John F. Kennedy indicate a fine metallic snow in the lower right neck area, suggesting that a lateral vertebral process was fractured by the jacketed rifle bullet." Dr. Fisher was a member of the 1968 Clark panel and was looking at the neck x-rays and not the chest x-rays which are missing. This is anatomically a very possible and probable bullet path. The facts are a neck entry one inch above the suprasternal notch and a back exit about 5 cm to the right of C7-T1 are depicted in photos F1 and F5.

X
Missing chest X-Rays

Thus the bullet path though the neck is front to back and left to right and horizontal or slightly down ward. It entered the neck about one inch above the suprasternal notch, without hitting the tie. It ~~did not~~ puncture the lung but caused contusions and fractured a lateral vertebral process (either C-7 or T-1) before exiting the back at about 5 cm to the right of T-1, as shown in F5. This corresponds satisfactory with the hole in the cloths since the cloths would be worn high and loose when sitting and waving. Also a 6'2" man has a significant natural curvature of the spine at this level. This bullet had to come from the front, behind the knoll fence closest to Elm Street and not the manholes; probably the point where the cigarette butts were found. This shot would have passed within 10 feet of Zapruder and was probably fired at the point where JFK was crossing the line between north and south of the fence parallel to Elm.

X

[illegible]

XX
"within 10 feet of Zapruder"
— Neck Shot

The so-called magic bullet did not occur according to the autopsy photos. Governor Connally was hit by another bullet, which had to come from behind, probably from the Sixth Floor~~, and by~~ Oswald, but this bullet did not pass though JFK. The JFK was shot at about Z film 210+- and Connally was hit about Z 232.

## THE SECOND BULLET WOUND FIRST HEAD SHOT

### The Parkland Wound, Photo F8

Z-210+ shot

Photo F8 the large defect of the head, must be correctly and positively oriented in order to understand the three wounds depicted in the photo. The body is on its right side facing right on the table and the round glass on the lower left is probably a JAR on the left side of the table. Opposite of the jar near the edge a drain hole is seen in the table. The neck is on a metal rest and the skin is folded to the left side. You are looking at the back of the head through the head to the face. The center of the photo is roughly the dividing line between left and right and above and below the nose level. Positive landmarks in the photo: The ruler is over the right ear and pointed towards the occipital protuberance [bony part at the back of

F-8
Orientation

X

the head] or this could be the right mastoid behind the ear. At the bottom of the photo two Dr.'s fingers are seen. About a ½ inch from the lower finger notice the steel object with 90 degree turns and straight lines. This is the rest is supporting the head. Follow the lines of this rest to the left and find the glass at the end. Notice the headrest in the left profile photo F4.

SEE JFK Stare-of-death photo (F1). Notice the semicircle in the right temple hairline at the end of a skin tear above right eye. Below this semicircle is a smaller wound or dark area, probably caused by a bone fragment. Notice the size, shape and direction of the torn skin around the semicircle skin flap in the right temple. In photo F8 this semicircle becomes a perfectly round hole with white light from the Dr.'s cloths reflected though it. The semicircle and the bone fragment wound are seen with light passing through them and the skin tear lines of F8 match the lines in F1. Thus the round white hole in F8 matches the semicircle at the end of the right temple skin tear in F1. Again find the neck rest about ½ inch from the lower finger in the bottom right of F8. As you slowly follow the straight line of the rest to the left you notice the skull overhangs part of the rest. About midway to center is the occipital protuberance [or the right mastoid??] and just above it is a white highlight in the bone. This highlight is reflection from fractured bone edges caused by a tangential gunshot wound as described by Dr. Crenshaw. See the back of the head photo F3. The protruding brain tissue in the hair near the neck is over the occipital protuberance and it is brain tissue still attached to brain within the skull. Photographic tampering by burring the hair prevents viewing the full wound in F3. This protruding brain passed though the white highlight seen in F8 at the occipital protuberance, which is at the bottom about ½ inch to the right of the middle of the photo. In F3 the ruler is near a skin wound in the crown area that in Groden's color F3 has been called the "red spot". The HSCA claims this is the Oswald entry wound. By size and shape this is an exit wound that corresponds with the semicircle in the bone slightly to the left center in F8. See Groden's right profile G1. The body is not in the same condition as the photo F1 however the semicircle and fragment wound on the skin tear in F1 can be identified in both photos. The semicircle, fragment wound and torn skin in F1, G1 and F8 are consistent thus these ballistic wounds are real. Photo F8 is now properly orientated by two objects and other photos.

## The Parkland Wound

See F8. The white highlight near the neck rest as located above is light reflection from fractured bone edges caused by a tangential gunshot wound. This is above and to the right of the occipital protuberance. By random luck a jet back area of shadow occurs where the bone is missing because of the natural shape of the skull and the lighting. Otherwise this photo would have disappeared with the other missing autopsy photos. The wound in the photo is best interpreted as if reading an x-ray, where black is air and white is bone. The "Parkland" occipital wound is clearly seen in the shadow by varying contrasts of the photo.

The purpose of taking photo F8 is to demonstrate the two round holes near the ruler at the center of the photo and not the Parkland wound which is in shadow.

**The purpose of taking photo F8 is to demonstrate the two round holes near the ruler at the center of the photo and not the Parkland wound which is in shadow. It appears that the photographer was almost attempting to photograph the bullet path from crown of the head exit to the right temple entrance, which is the fourth and last bullet wound to be discussed later.**

**The Parkland wound is a large hole in the back of the skull behind the right ear ending at the occipital protuberance and measuring about 1½ by 1 inches. It is egg shaped or oval. This is a tangential wound where entry and exit holes connect forming one hole. Direction of the bullet is from the right moving left as determined by the visible inward and outward beveling of the skull in the photo. This was a near miss. Follow the gray skull surface from the lower finger to the left highlight area and notice how the highlight disappears into black shadow, which is air. This is inward beveling of the skull. Continuing across the highlight a full thickness of the bone is seen starting from the inside of the skull, which is black shadow. This is outward beveling. Most Parkland doctors describe this wound size and shape and location but call it an exit wound because they did not examine it in detail. Dr. Crenshaw describes this as a tangential wound. Intact cerebellum tissue would be exposed with little damage from this bullet. The autopsy Drs. are telling the truth about an entry wound here but they are not telling about its path and exit. The autopsy Drs. have been ordered to lie but they manage to keep many of the elements of the truth in the medical record.**

XY

XY

XXX

XXY

**The Parkland wound is not seen in the x-rays however the fractures lines in the x-rays indicate that this was the first shot to the head. Dr. Mantik has discredited the x-rays as fakes in Assassination Science. About Z film 310-311 the back of JFK's hair is puffed out probably by this shot. According to Lifton, p 49, JFK's head moved forward or clockwise rotation to the right about two inches between frames Z-312 and Z-313, which is consistent with this shot occurring about 310-311. Also the Z film has the extremely black blob at the back of the head, which could be very simple, and quick photo tampering to hide this wound or natural shadow. It is educated speculation that this was the first headshot given the limited evidence. This shot came from the right front, most probably the badge man position behind the fence. The bullet would have almost certainly have hit the car but of course it was not reported and the car was immediately rebuilt thus alternatively the bullet could have hit the street as some have reported and was lost.**

Fracture cntr

Does Robertson say the same?? = Dr. Riley

Probably the most important confusion of all

## THE THIRD BULLET WOUND, SECOND Head Shot

**Photo F8 shows a .45 cal. bullet entry above the right ear. It was the THIRD SHOT TO HIT JFK and second shot to the head as determined by the skin tear leading to it from the white circle last headshot to the right temple. This shot had to occur about Z 312 and almost simultaneous with the last shot. The fact that the skin tear ends at the .45 wound indicates that the .45 wound had to occur before the right temple wound which caused the skin tear between Z 312-313. This .45 cal entry shot appears to be the objective of photo F8 because it is center frame, well lighted and near the ruler. It is about ½ inch above and left of the left upper corner of the ruler. It is the size of the Dr.'s fingers or 11 mm in dia. or ½ inch, which is about the size of**

Showing back of the head in frame

Probably "natural shadow" unlikely: tampering

**a .45 cal. bullet entry wound. The ruler is 3 cm wide. The skin edges are beveled inward in a circular shape. A compression ring from a bullet entry is seen in the skin. The bullet scraping against the skin caused this compression ring. The skin was pulled into the skull bone inward beveling and compressed forming the rings. Light is not seen passing through the hole due to hair and lighting position but a dark circular hole is seen in the skin. The F8 skin tear across the right temple is consistent with photo F1 and Groden's right profile photo G1. Deputy Sheriff Rodger Craig identifies a .45 cal bullet being recovered at the manhole cover on South Elm St. not in his "officially reported Warren Commission testimony" but in several films and books {Mark Lane, Two Men in Dallas, Jim Garrison Tapes}. He claims to have reported it to the Commission but they failed to record it.**

> **Mr. BELIN. So, you searched the south curb of Elm?**
>
> **Mr. CRAIG. Right.**
>
> **Mr. BELIN. Did you find anything there to indicate the ricocheted bullet?**
>
> **Mr. CRAIG. No, we didn't find anything at that time. (6H265)**

**His last statement indicates that at a later time he did find a bullet as stated in the films and books but that is not recorded. The recovered bullet was photographed by the news media. Thus this wound is presumed to be from a .45 because the photo cannot be used for precise determination of caliber. This compression ring could only have been caused by a large bore bullet entering the head. This structure is not the ear canal and must be explained. The HSCA calls this a fragment exit, which it is not. The compression ring is thicker near the ruler or back and thinner towards the front of the head. This suggests the possibility that this shot came from an angle slightly behind but almost due right of JFK [perhaps a 70° angle of entry instead of 90° but it could have come from the front because JFK's head is turned to the left at Z 312].**

**See High Treason 2 page 335, Zapruder frames 313-314. Zapruder is almost at a true 90° perpendicular to the car and JFK. JFK's head is looking left and downward. Notice the white streak from the top of JFK's head. The object is moving fast about 100+ feet per second thus causing the streaking effect in 1/18th of a second. So fast that it shows up as a streak instead of an object. It is tumbling as indicated by the larger darker dots in the streak. The dark dots are roughly the size of JFK's earlobes or ½ inch, which is roughly the size of a .45 cal. bullet. (Shutter speed 1/60 sec. frame speed 18.1 sec., streak is 2 ft. or 7 ear lengths long with 4 revolutions.) It is not going straight up but forward of the car about 75 degrees. The streak is white/gray due to the color of lead and brain and the speed of the drops. The sun is at 55 degrees casting shadows to the north at 15 degrees and east thus it reflects light towards Zapruder. According to Dr. Fetzer, Assassination Science, p 294, the speed is 135 ft/sec with a maximum ascent of 252 feet with a total flight time of 8 seconds. This is not fast for an exiting bullet but too fast for it to be bone or brain. As discussed above the only object found in front of the fatal headshots was the reported .45 cal. slug on top of the ground near the manhole, seen in Z 384-400 on the south side of Elm, a distance of about 80 feet, by Foster,**

**Walthers, Craig and photographed by the news media. A picture of the bullet was published in the Fort Worth Star Telegram Evening Edition Nov. 23, 1963. The slug was taken by an unknown FBI agent, [possibly Robert M. Barret]. [The HSCA test fired a .45 cal. bullet from a position near Zapruder during its re-enactments but in error concluded that it did not strike JFK if it was fired.]**

**Conclusion: A .45 cal bullet was fired from a position almost in line with Zapruder to JFK. Dealey Plaza photos indicate that a CIA assassination camera with a built in .45 cal. gun could have been used to conceal the shooter in plan view because he would appear to be taking pictures. Otherwise the shooter was behind Zapruder near the building or behind the fence. The several films showing Zapruder at the time of Z312 the last shots fail to show any possible shooters. The .45 struck JFK above the right ear. Another bullet then stuck JFK's head and the .45 is seen leaving the head in Z 314. The .45 bullet was photographed and recovered at the manhole.**

## THE FOURTH and last BULLET WOUND, THIRD Head Shot

**In the JFK Stare-of-death photo (F1), notice the semicircle in the right temple hairline at the end of a tear above right eye. This is the point of entry of a high velocity bullet (at least 2000 ft/sec). This was the FOURTH BULLET WOUND, and THIRD Head Shot. Note the small dark mark just below it on the skin flap. This is a fragment wound caused by a bone or bullet fragment. Note that the lighting is good and you can see the floor. Note that the semicircle flap is raised away from the head due to underlying bone. No bone or brain can be seen in the black triangle near the skin flap. On good quality photos one can count the floor tiles leading to the right head wound. As the tiles disappear into the wound a thin white highlight appears in the size and shape of the natural skull. No brain is seen meaning that the top of head photos F6 and F7 and G1 show a brain present where F1 shows it missing thus different body conditions exist. If brain were present as shown in F6, F7 and G1 one would see a thick mass of reflected light from the brain in a position extending beyond the normal curvature of the head in F1. [F6, F7 and G1 show signs of being composite photos with deliberate tampering where F1 does not.] This thin white highlight in F1 is a frontal view the occipital bone edge as located in F8. As discussed above this right temple semicircle becomes a round white circle in photo F8 when the skin flaps are closed. The lower fragment wound is also seen with light passing though it. The skin flaps in F1 are consistent with F8 and a few points of light pass through the skin tear. This round hole is small about 6 mm and an inward flap of tissue can be seen hanging from the skin margin in F8. This is an entry wound by size and shape. See Figure X-28 and compare the wounds.**

3 HEAD SHOT ?

BRAIN PRESENT IN G-1

**JFK Top of the head photos (F6 and F7), notice the jet-black perfectly round dot within the black triangle at the point of entry, of the right temple hairline semicircle. This dot has been placed on the photo in a darkroom to hide the wound. The background is black where the floor and walls should be seen. In F7 the wall can be seen over JFK but it fades to black at the edges. The round dot has changed to a black triangle. The photos have been tampered with to conceal the wound.**

I DON'T [illegible] [illegible] OF [illegible]

I [illegible] AGREE (G-1 DOT)

Strange photographic lines, probably matt lines, are present in F6 and F7 indicating that the hanging brain maybe a composite photo.

Groden Superior Right Profile (G1). In G1 the right temple triangle is gray intact bone, which is not present in F1. This bone should be seen in F1, F6, and F7 and thus this may be a composite photo. The background has been blacked out with the hairline from left to right. No individual hair texture can be seen and the hair has moved from F1. Individual hair texture can be seen near the Right Ear in G1 and F1. The right temple fragment wound can be seen in G1 and below it the bullet entry semicircle is well lighted and thus less visible but it is present. In addition to F8 both G1 and F1 confirm the presence of the semicircle and the fragment wound on the right temple skin flap. Deliberate photo tampering obscures these features in F6 and F7. The underlying bone holding the flap away from the head in F1 is not seen in G1. This bone does not appear fractured as Dr. Humes reports and its presence is inconsistent with the other photos and x-rays. The lacerations, semicircle, fragment wound are consistent in the photos F8, F1, G1, F6, and F7 even though the body condition has changed. The brain seen hanging down in F6, F7 and G1 is not seen in F1 so the body has changed between the photos.

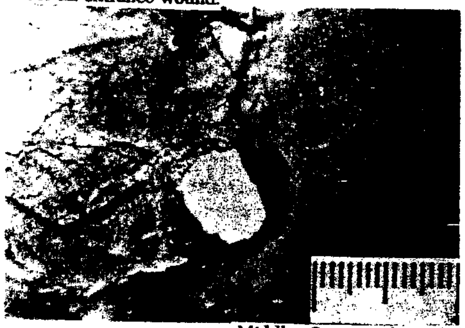
Photo F8, JFK Large Defect, in the center of the photo is a semicircle on the occipital bone edge. This an exit wound due to the outward beveling of the skull seen in the photo. This is the right superior occipital bone near the lambda along the lambdoid suture, which is on the missing bone. This is about 4 inches above the occipital protuberance. This would be the crown of the head area, which is the head wound near the ruler in F3 [also seen in F5] known as the red spot. The red spot is the exit of the right temple hairline entry wound seen as a white circle in F8. Below the occipital bone semicircle is a star shaped area of dry blood on the bone. To the left of the dry blood is a dark black area in the folded skin flap. This is bruising caused by the exit wound in the skin at the location of the "Red Spot". The dry blood is the size and shape of the actual skin exit wound. Sometime during the transport the bullet hole in the skin slipped over the occipital bone and air passed though the hole causing the blood and tissue to dry in the size and shape of the hole. The dry blood is about 20 x 30 mm at the longest points of the star. The oval body of the star is about 10 x 15 mm. This is the size and shape of an exit wound and not an entry wound as claimed by the Government. The semicircle edge on the occipital bone, the dry blood on the occipital bone and the bruising in the skin flap with the size and appearance in F3 demonstrate that the F3 red spot wound is an exit wound of moderate to low velocity. Also notice the positioning of the red spot wound in a line opposite the right temple entry and that the x-rays show a particle path connecting the two wounds. According to Dr. Mantik this particle path indicates a front to back bullet path.

Conclusion: The fourth shot, third head shot, entered the right temple hairline and traversed cranial cavity in a front to back direction depositing minute particles along its path at the top of the head exiting in the crown area about 4 inches above the occipital protuberance known as the red spot. The velocity of the bullet with the existing skull fractures from the other two headshots was enough to cause the head to explode.

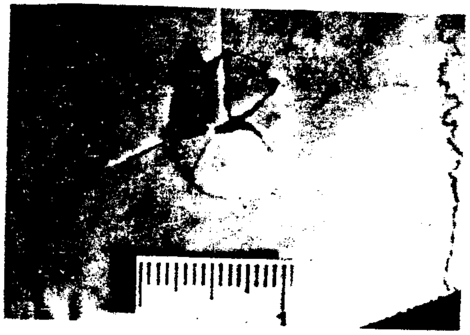
Remember according to Wilber, the internal cranial pressure is

**approximately equal to the square of the velocity of the bullet. In addition bullet velocity must be a minimum of 2,000 feet per second {yielding 4,000,000 pounds per square inch} to cause an intact skull to explode. The size of the temporary cavity depends on the kinetic energy of the bullet, $E_{kin} = (m/2)\ V^2$ where V = velocity and m = mass (bullet weight). The internal cranial pressure depends upon fluid physics. Pascal's law, fluid pressure is the same in all directions. Liquid is relatively incompressible and external force is transmitted equally throughout the volume of the liquid. Fluids transmit pressure undiminished in a hydraulic press, which is a closed container. The kinetic energy of a fluid is, $E_{kin} = 1/2mV^2$ where V = velocity and m = mass (of the fluid). Bernoulli's equation, $P + pgh + 1/2PV^2 = \text{constant}$ where P= absolute pressure and p=mass density of fluid. Simply put, the skull is a closed container filled with water and when a bullet moves fast enough the skull will explode. The fluid physics require most of the blood and brain to splatter in the direction of the bullet path. In the case of JFK blood and brain was splattered to the left rear of JFK due to the frontal shots.**

FIGURE X-53. Upper: Internal surface of the skull, showing inward bevelling of the defect in the bone under an entrance wound.



Middle: Outer surface of the skull, to show the mechanism of outward bevelling at the exit. Note the raised bone fragments by the exiting bullet.



The actual hole is shown in the lower photograph. Lower: Outer surface of the skull, showing outward bevelling of the exit defect.

IS THE PHYSICS wrong?
↓
ASK
ART
SNYDER

## BULLET IMPACT UPON THE SKULL

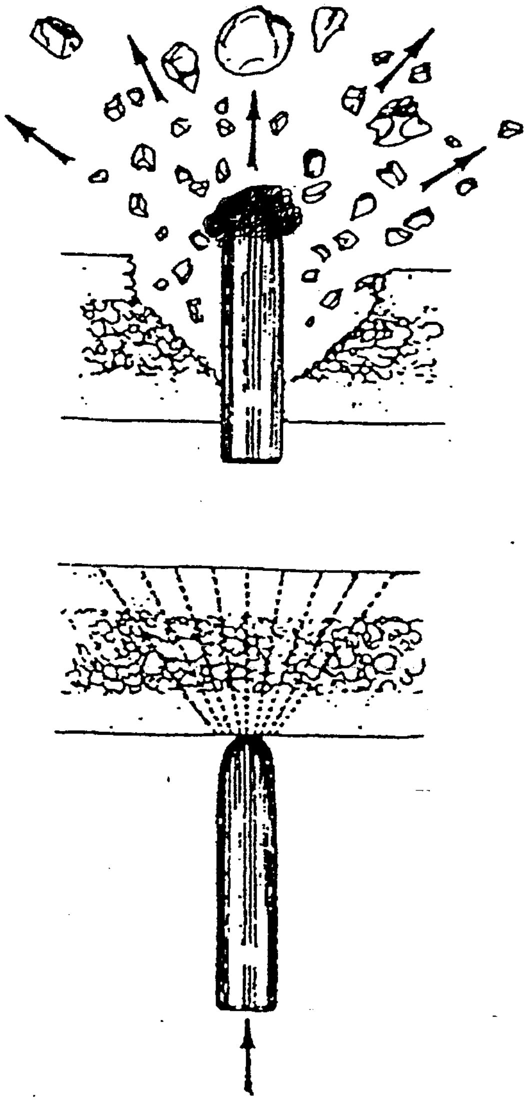


Figure 15.
Beveling

Diagram illustrates that a missile striking a surface of the skull—whether entering or exiting—creates a small hole on the side of impact and a larger, beveled-out hole as it emerges from that surface. This "beveling" effect permits a distinction to be made between bullet entrance and exit wounds of the skull, since the larger, beveled-out hole will be on the side opposite the point of impact. Thus, if the exterior surface of the skull exhibits beveling, the wound is an exit; if the interior surface does, it is an entrance.

1. **The bullet hits the skin crushing it against the skull. The outer skin edge is curved inward and stretches as the marginal abrasion compression ring is formed as the bullet passes. A hole about the size of the bullet is formed in**

the skin. Sometimes crushed skin tags remain attached to the inner compression ring as seen in the white circle in F8.

2. The bullet hits the skull and it fractures in a unique cone shaped pattern of inward beveling. The hole in the skull surface struck by the bullet is smaller than the hole on the exiting the surface. Other fractures often occur parallel to the suture lines of the skull bones. About 300 foot-pounds of energy is transferred from the bullet to the skull to cause the fractures.
3. Bone fragments become missiles and enter the brain. The bullet is deformed by the impact. Some bullets mushroom while others fragment. Often the direction of the bullet path is deflected by the impact with bone. Thus bullet path through the body usually does not point directly to the shooter but to the general area of the shooter. The path of the final JFK headshot is upwards at about 30° as measured on Z 312. The path is also left to right given the looking left head position indicating a south bridge sewer shooting position assuming only slight upward deflection. Because of the probability of deflection the shooter could be in either the lower or upper sewer or behind the picket fence or even on or under the bridge and probably the south bridge sewer but absolutely in front of JFK. It is very difficult to match JFK's Z 312 position with this frontal shot and the shooter's position.
4. Occasionally some of the skin edge will be pulled into the bone beveling fracture of the skull, which can be seen in the marginal compression ring of the skin. Compression rings cause the skin to be inward beveled so that when the excised skin is laid flat and viewed from the inner surface the wound margins are elevated higher than the surrounding skin. To demonstrate, punch a hole in a sheet of paper supported by a cardboard box with a pencil and examine the hole from both sides of the paper. Notice the characteristics for determining the direction of the entry.
5. As the bullet enters the brain a few inches the internal cranial pressure rises to approximately the square of the velocity of the bullet, which is a minimum of 2,000 feet per second {yielding 4,000,000 pounds per square inch} to cause an intact skull to explode. [JFK already has two bullets in the head so less pressure is required.] [Go to a lake and throw bullet-sized rocks into the water and study the size and shape of the splash at varying velocities and angles of impact. The faster the rock the bigger the splash. In a closed container this means a bigger explosion.]
6. Pascal's law, fluid pressure is the same in all directions. A small amount of blood is then ejected under pressure out the entry hole. [Blood does not have to pool as some have said because the passing bullet virtually liquefies the brain and the pressure forces it out the entry hole.] In the case of JFK the .45 bullet is seen exiting the head and both a lower and a horizontal jet of blood are seen going towards Connally in Z 313. This blood appears to be ejected from both the right temple entry and the .45 entry. No jet of blood is seen from the occipital Parkland wound because the intact brain acted like a plug. The Parkland wound bullet left the brain virtually intact however this initial pressure probably caused the protruding brain tissue seen in F3 and the cerebellum tissue reportedly seen at Parkland. An unusually black blob

INTACT BRAIN

**obscures the back of the head wound in the Z film. This could be photo tampering to obscure the occipital wound but it could be natural shadow but it is strange. Closed containers filled with water produce the same effect when shot. A small amount of fluid is usually ejected from the entry towards the shooter. [This amount of fluid, less than an ounce is part of the so called "jet effect theory" for the JFK backward head snap discussed below.]**

Go For THIS!

7. **As the bullet proceeds the internal cranial pressure reaches maximum and the skull explodes. The skull fractures and the skin rips along lines of least resistance thus the head explodes near the point of bullet entry. The skin often rips across the entry wound leaving semicircles on the skin flaps. When the skin flaps are brought together a complete circle of entry is formed. The explosion reduces the pressure wave around the bullet. Remember JFK already has two bullet wounds to the head with multiple skull fractures thus the bullet velocity to explode the skull is less than 2000 ft/sec. [Also notice that the .45 cal bullet is probably inside the skull and moving at the same time thus increasing pressure.]**
8. **The bullet traverses the brain with reduced velocity and a smaller temporary cavity. About 160 foot-pounds of energy is transferred from the bullet to the head.**
9. **The deformed fragmented bullet hits the skull and it fractures in a unique cone shaped pattern of outward beveling [usually larger than the entry wound] as it exits the skull. An additional 300 foot-pounds of energy is transferred from the bullet to the skull to cause the fractures.**

OUT WARD [illegible]

10. **The bullet exits the skin. Because the head exploded with many skin rips and flaps with multiple skull fractures the skin exit may not be exactly over the skull exit. Because the skull exploded reducing the pressure wave and the slowing of the bullet to low velocity the exit is only 2 to 3 times the bullet diameter instead of several inches were it at high velocity. This is a situation where the gross appearance of the exploded entry appears larger than the exit. Discounting the skin rips caused by the explosion the entry is smaller than the exit, which is almost always the case in all ballistic wounds.**

## ALL OF THIS OCCURS IN $^{1}/_{2000}{}^{\text{TH}}$ OF A SECOND

**In 1/18th of a second the bullet travels 111 feet assuming a bullet speed of 2000 ft/sec.**

## THE HEAD SNAP

**It is the force of the last frontal head shot bullet that causes JFK's backward head snap. We have no proof that the final frontal shot was from a Carcano nor do we know what bullets were used thus the following is just academic speculation as to what is possible. The numbers can be altered, within reason, as needed to fit the true results that are seen in the Zapruder film. What this proves is that it is possible for bullets from the front to cause the head snap and that no shots from the rear Sixth Floor occurred.**

X

**The momentum of a Carcano bullet transferred to the head according to Wilber, p 222 is 1.1 feet per sec. This is 13.2 inches/sec and 0.733 inches per Z frame. [Using his numbers and recalculating the momentum is actually 1.6 ft/sec**

**which is 19.2 inches/sec and 1.1 inches per Z frame which is about the actual head snap movement of 12 inches over 10 frames, Z 313-323. According to Thomson the velocity of the head snap is 1.6 ft/sec. over 8 frames, which equals 1.1 inch per Z frame.] The momentum of the bullet impact is 43 foot-pounds per second. Momentum of a particle, P = MV. Assuming: A Carcano 160 grain bullet times 1900 feet per second = 304,000 foot grains per second divided by 7000 grains (per pound) = 43 foot-pounds. A foot-pound is the energy it takes to move one pound a distance of one foot without any friction or resistance. This small energy is only half of the story. Understand that the bullet penetrated the skull striking it two times, at entry and exit. This double impact is often overlooked along with the kinetic energy transfer and the work done by the bullet. The momentum of the first impact is 43 foot-pounds and the second impact is about half or 20 foot-pounds. Thus at least 60 foot-pounds of momentum exists in the bullet. JFK's momentum is the speed of the car about 3mph or 4½ ft/sec [depending upon who calculates it] but in this study it is considered zero.**

**According to Wilber the head neck mass is 34 pounds (20% of 170 lbs) but the weight of the head neck mass is not related to a percentage of body weight so this is a crude guess. Simple subtraction says that 34 pounds can be moved at least one foot [head snap distance] when acted upon by a force of 43 to 60 foot-pounds but this is not the formula for collisions. An assumption of 34 pounds for the head and neck seems extreme when the head is considered as an 9" sphere its volume is 381" cubic inches. [1 gal = 231 in$^3$ or 3.7853 l$^3$ with a weight of 8.3 lbs/gal.] The density of the head should approximately equal the value of water or 62.4 lb/ft$^3$ or 1 kg/liter because the airways would cancel out bone density leaving only water to consider. A 9" sphere of water weighs 13.75 Lbs [62.4 / 1728 x 381]. JFK's brain was weighed at an exceptional 1500 grams, which is only $3^{1}/_{3}$ lbs leaving 10 lbs of bone and other tissue. If the head and neck are considered a 9" high cylinder with a 4.5" radius it has a volume of 572 in$^3$ and it would weigh 20.6 lbs when filled with water. According to the burn formulas the head is 14% and the neck is 4% equaling 18% of body surface area. Thus 14% of 170 is 23.8 lbs but the weight of the head is not related to a percentage of body weight. Averaging 23.8 and 13.75 we get 19 lbs. Only a small part of the neck mass is involved in the head snap because the head pivots on the neck. The neck acts like a tether stopping maximum backward head movement storing potential energy from the kinetic energy and causing forward rebound movement starting at Z 324 with the release of the potential energy. Placing several persons supine with the head resting on bathroom scales resulted in an average range of 8 to 10 lbs. An assumption of 15 to 20 lbs for the head neck mass appears more realistic than 34 lbs. I suspect that mid-neck severed heads weigh about 15 lbs but I do not know of any corner studies confirming this. An accurate estimate of the head neck mass is essential to the calculations.**

**[Using 15 lbs, $E=(\frac{1}{2} \times 15)(1.8)^2$ = 24.3 foot-pounds, using 26.5 lbs, $E=(\frac{1}{2} \times 26.5)(1.8)^2$ = 43 foot-pounds, using Wilber's 34 lbs, $E=(\frac{1}{2} \times 34)(1.8)^2$ = 55.08 foot-pounds required to move the head as seen in the Z film.]**

## An Interview With Duncan MacPherson

**By Joel Grant**

**"The movement of a body due to bullet momentum cannot be greater than the movement of the same body if it was holding the gun that fired the bullet."**

**Thus depending upon the rifle the recoil momentum is often enough to cause shoulder movement of 3 to 8 inches and in some cases enough to knock the shooter to the ground. If one placed the butt of a rifle against the head and fired the momentum would be enough to move the head several inches.**

**From the testimony of Larry Sturdivan, physical scientist with the Wound Ballistics Branch of the Aberdeen Proving Grounds since 1964**

**1HSCA404 --**
**(re: film of skulls filled with a 20% gelatin solution the skulls are not attached to anything to simulate the neck)**
**"In fact, all 10 of the skulls that we shot did essentially the same thing. They gained a little bit of momentum consistent with one or a little better [than a] foot-per-second velocity that would have been imparted by the bullet and they also lost material toward us, that is, toward its right and, therefore, rotated towards its left."**
**1HSCA414 --**
**[JFK Exhibit JFK F-303]**

**Energy = ½ MV²**
**Momentum = MV**
**Mannlicher Carcano Bullet**
**Momentum Lost: (162/7000) * 800 = 18.4 lb. ft./sec**
**Head of Kennedy**
**Velocity gained: 18.4/15 = 1.2 ft. sec**
**Energy deposited: 1110 Joules ~ 800 ft. lb.**

**[This exhibit shows a loss of velocity of 800 ft/sec upon exiting and a head weight of 15 lb with a 162 gr. Bullet. The impact velocity was almost 2000 ft/sec. It took about 800 ft. lb. to penetrate the skull. ]**

**Mr. Fauntroy. The exhibits which are being placed show, as I say, a rearward thrust of the President's head and his upper body, a fraction of a second after he was shot in the head, and the assassination critics have insisted this rearward thrust clearly indicates that the shot came from the front, the theory being that the force and momentum of the bullet, Mr. Sturdivan, carried the President's head toward the rear of the limousine.**
**Mr. Sturdivan. As we can see from the chart, this velocity of 1.2 feet per second is not the kind of velocity that would throw the President bodily around backwards, forwards, or in any direction no matter which direction the bullet came from.**

**The Government has failed to address the details of the physics involved and minimizes the forces at work. JFK's head is moving backwards at 1.1 feet per second just as calculated at 1.2 ft/sec.**

**Momentum is only half the story of the head snap. The kinetic energy**

**transferred from the bullet to the head must also be considered. Work of a resultant external force on a body is equal to the change in kinetic energy of the body. The energy required to accelerate a mass to a given velocity is proportional to the square of the velocity ($E = ½MV^2$). Assume JFK's head snap is a big 10 inches over five Z frames 313-318 for a velocity of 2 inches per 1/18 sec. or 3 ft/sec. $E=(½x34)(3)^2=$ 153 foot-pounds of energy required to do the work of moving JFK's 34 lbs head. According to Lifton, p 49, JFK's head moved forward or clockwise rotation two inches between frames 312 and 313. This is consistent with the Parkland occipital wound occurring about 310-311. The .45 cal. wound occurs about 311-313 but it is not discernable in the film. The last shot occurs between 312 and 313 and head then snaps backward and left from 313 to 323 and rebound forward motion starts at 324. Excess energy transferred to the head causes this rebound at 324 when the neck acts like a tether. Lifton does not give the distance traveled during the head snap but it appears to approximately equal to the top of the car window in front of Connally. Assume it to be a long distance of 1 foot. The velocity is then 12 inches per 10/18$^{ths}$ sec. [313-323], which is 21.6 inches per second or 1.8 ft/sec. $E=(½ \times 34)(1.8)^2$ = 55.08 foot-pounds required to do the work to move the 34 lbs head. Let us assume an extreme head snap of 12 inches in 5 frames [not seen in Z film] then 220 ft/pounds of energy is required to move the head. Edgewood Arsenal ballistic tests for the WC, Wilber p 166, 6.5 mm 160 grain Carcano tests simulating the Magic bullet:**

| $E = mv^2/2g$ 7000 or $mv^2/450{,}000$ | | |
|---|---|---|
| **Bullet Location** | **Velocity feet/second** | **Energy Foot-pounds** |
| **Muzzle** | **2160** | **1638** |
| **60 yards** | **1900** | **1268 = 370 lost** |
| **After exiting 14cm JFK's neck** | **1779** | **1111 = 157 lost*** |
| **After exiting Connally's rib** | **1514** | **805 = 306 lost*** |
| **After exiting Connally's wrist** | **1432** | **720 = 85 lost*** |
| | | ***Energy lost from the bullet and transferred to the body** |

**Edgewood Arsenal was attempting to prove the magic bullet thus this data is probably misleading. Skull bones tend to fracture at about 300 ft/pounds but the skull has different thickness and curvatures thus the amount of energy to cause fractures is variable by location on the skull. Assumptions: It takes about 250 to 350 ft/pounds to fracture the skull, which is close to the rib fracture energy above. Assume the energy of the above 14 cm of the neck wound is needed to transverse the brain. Assume the energy for skull fractures is equal to the wrist.**

| **Using the above data:** | **alternate values** |
|---|---|
| **Skull entry = 300 ft/pounds** | **85** |
| **Brain = 157** | **157** |
| **Skull exit = 300** | **85** |

757 ft/pounds transferred to JFK's head 327

Kinetic energy is the force or ability to do work. Work requires the movement or displacement of objects. The kinetic energy transferred from the bullet to the body is more than enough to overcome the momentum required to do the work of moving the head backwards no matter what extreme or minimal values are used for the academic calculations of the head snap. No matter how one manipulates the numbers the bullets momentum plus kinetic energy transferred results in the work of backward head snap of one foot in [10 Z frames], 10/18$^{ths}$ of a second due to a frontal headshot. The bullet would exit with about 500 foot-pounds at a speed of about 1185 ft/sec.

Additionally the effects of the .45 cal. bullet must be considered. Momentum of a particle, P = MV. Assuming: A .45 cal. 230 grain bullet times 800 feet per second = 184,000 foot grains per second divided by 7000 grains (per pound) = 26 foot-pounds of momentum energy. The kinetic energy of this bullet [$E=mv^2/2g7000$ or $mv^2/450000$] is 327 foot-pounds. Assuming 319 foot-pounds for distance to JFK and to enter the skull and brain, leaves 8 foot-pounds remaining in the bullet thus the velocity of the exiting bullet would be 125 ft/sec. The streaking .45 cal. bullet seen exiting in Z 313 is moving 100 to 150 ft/sec. This speed is consistent with the math because the speed of entry is not known nor is the energy transferred known. What is known from the Zapruder film is that JFK's head rotates a full 90° to the left at Z 316-323. Because the head freely rotates on the spinal coulomb when unconscious very little energy is required to accomplish this rotation. The head snap as seen in the Zapruder film is true and correct and consistent with two bullets to the right temple area.

Energy to move a 34 lbs head mass as calculated above 55, 153 or 220

| Bullet momentum | Kinetic energy transfer | | | |
|---|---|---|---|---|
| 43 + 20 (double impact) | 757 | or | 327 | [ last bullet] |
| 26 | 319 | | | [.45 cal bullet] |

Maximum Total = 1169 foot-pounds to perform the work of the head snap motion of one foot in 5/9$^{ths}$ second. The work or movement of a resultant external force on a body is equal to the change in kinetic energy of the body. The excess energy results in the forward rebound movement starting at Z 324 and the movement of the exploding bone, blood and brain matter to the left rear of JFK.

The total energy transferred from the two bullets to the head is more than enough to overcome the momentum required to move the head backwards no matter what extreme or minimal values are used for the academic calculations of the head snap.

## JET EFFECT THEORY

→ rejected by the [illegible]

Luis Alverez, A Physicist Examines the Kennedy Assassination Film, American Journal of Physics Vol. 44, No. 9, September 1976, performed a good study of the Zapruder Film but failed to understand his ballistic experiments.

**Alverez proposed the jet effect theory as the reason Oswald's third shot to the back of the head caused the backward head snap. Alverez used tape covered melons shot with a 30-06 at 3000 ft/sec and found that the melon was propelled towards the shooter and not away as expected. A melon is not a head attached to a body nor does it simulate the skull and energy transference of the bullet. Alverez wrongly assumes most of the kinetic energy of a bullet is transferred to heat and not mechanical energy. A bullets kinetic energy is transformed into the work of penetrating the target and into the movement of the target in addition to heat. Kinetic energy is required to crush wood as it penetrates and is then transformed into the movement of the wood block both horizontally and vertically. Alverez totally ignores his own experimental results of the large spray of melon fluid in the direction and path of the exiting bullet. He then ignores the fact that most of JFK's blood and brain was blown back and left of JFK indicating a frontal shot. Alverez does not disprove a frontal shot as the cause for the head snap. He only suggests the "jet effect" theory as a justification for the head snap from Oswald's third shot. I have never shot taped melons like Alverez.**

**Having shot many closed containers filed with water, the only times the containers falls towards the shooter is when the container split causing near 99% of the water to exit out the very large exit hole. The lighter container is then moved towards the shooter by the 1% of water that was being forced out the entry hole due to the increased pressure prior to the bullet exit. Pascal's law, fluid pressure is the same in all directions. As the bullet penetrates the container the internal pressure increases forcing fluid out the entry towards the shooter. The large exit occurs and the container bursts releasing most of the fluid away from the shooter. Due to the lightweight of the now empty container the fluid moving towards the shooter via the entry is able to move the lightweight container towards the shooter. The jet effect is a real fact but of a very minimal force that rarely occurs in water filed heavy containers and probably never in animal or human heads tethered by the neck. The jet effect is limited to very lightweight containers filed with water and not heavy bodies. The jet effect could not account for JFK's head snap as explained under "Bullet impact to the Skull #5 and #6" above. In the case of JFK the skin flap folded over the right ear after the explosion of the head dissipating the last of the jet effect energy of the frontal entry.**

**Principles of physics must be followed in evaluating the assassination. Bullet energy transfer to the body is obtained by measuring velocity at entry and exit. Newton's laws: momentum is conserved in a collision to wit the momentum "before" has to equal the momentum after. Momentum is transferred along the line of flight to the object struck. Likewise energy is conserved to wit total energy of a system of bodies in isolation is always constant although energy transformations may occur from one form to another within the system. Thus a change in kinetic energy must equal a change in potential energy plus other dissipative forces such as work or movement, friction, heat, and etc. Energy is never destroyed but transformed within the system. Likewise fluid pressure is the same in all directions. Pascal's law: An external pressure applied to an enclosed fluid is transmitted uniformly throughout the volume of the liquid. Fluid transmits pressure undiminished in a hydraulic press. The head is simply a closed container filled with water. Newton's**

**second law of motion: When a force acts upon a body, it produces an acceleration in the direction of the force, an acceleration that is directly proportional to the force and inversely proportional to the mass of the body. When two bullets enter the right temple area of JFK with about 1100 foot-pounds of force transmitted to the head you have the head exploded with a head snap back and to the left with blood and brain sprayed to behind and left of JFK. The Zapruder film is consistent with the laws of physics and the autopsy photos and the blood splatter patterns and two bullets to the right temple area.**

**Take a block of wood to simulate different values of JFK's assumed head neck mass of 10, 15, 20, 25 or 34 lbs. Mounting the block on a skateboard reduces the energy lost to friction but the total weight of the block and the skateboard must equal the assumed head mass. Fire a bullet of known size, about 160 grains, and speed, at least 2000 ft/sec, into it. Measure the distance the block moves. In the example below the block of wood is fixed and does not move. Repeat the experiment with a bullet that delivers 1000 foot-pounds of total energy. This experiment proves the head snap to be the result of a frontal shot to the head if a bullet can move the assumed head neck mass block a distance of one foot without friction.**

WOOD BLOCK & [illegible]

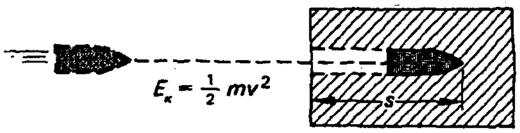


**Fig. 7-4** The work done in stopping a bullet is equal to the initial kinetic energy of the bullet.

**Example 7-5** What force *F* is necessary to stop a 16-g bullet, traveling at 260 m/sec, as it penetrates into wood a distance of 12 cm?

*Solution* The total work required to stop the bullet will be equal to the change in kinetic energy. (See Fig. 7-4.) Since the bullet is stopped, $v_f = 0$, and so Eq. (7-4) yields

$$Fs = -\tfrac{1}{2}mv_0^2$$

Substituting,

$$F(0.12\text{ m}) = -\tfrac{1}{2}(0.016\text{ kg})(260\text{ m/sec})^2$$

Dividing by 0.12 m,

$$F = \frac{-(0.016\text{ kg})(260\text{ m/sec})^2}{(2)(0.12\text{ m})}$$
$$= -4{,}500\text{ N}$$

The minus sign indicates that the force was opposite to the displacement. It should be noted that this force is more than 30,000 times the weight of the bullet.

Z-FILM
consistent
WITH
(A) LAWS OF PHYSICS
(B) AUTOPSY PHOTO
(C) BLOOD SPLATTER PATTERN
(D) BULLETS (2) HITTING HEAD

**Example 8-5** A 12-g bullet is fired into a 2-kg block of wood suspended from a cord, as shown in Fig. 8-6. The impact of the bullet causes the block to swing 10 cm above its original level. Compute the velocity of the bullet as it strikes the block.

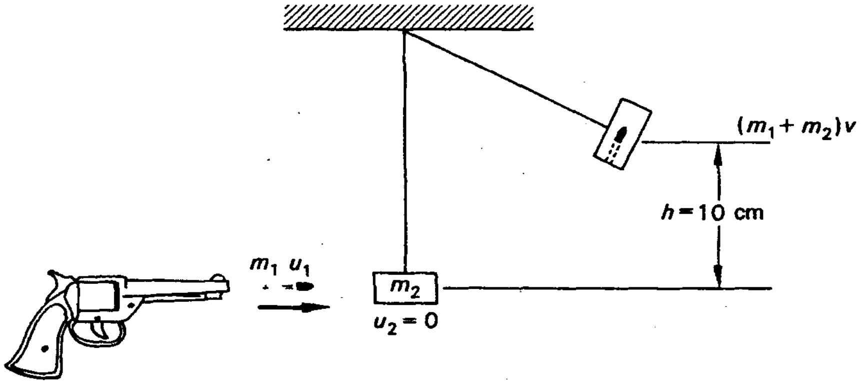


**Fig. 8-6** Computing the muzzle velocity $u$ from energy and momentum considerations.

*Solution* We can compute the combined velocity after impact from energy considerations. The kinetic energy of the bullet is lost to potential energy of the block and bullet as it rises to the height $h$. Hence, if $v$ is the initial velocity of the block and bullet, we have

$$\tfrac{1}{2}(m_1 + m_2)v^2 = (m_1 + m_2)gh$$

Dividing by $m_1 + m_2$, we obtain

$$v^2 = 2gh$$

from which

$$v = \sqrt{2gh}$$

Therefore, the combined velocity after collision is 9.8 m/sec² = gravity

$$v = \sqrt{(2)(9.8\ \text{m/sec}^2)(0.1\ \text{m})} = 1.4\ \text{m/sec}^2$$

The momentum equation then becomes

$$m_1u_1 + m_2u_2 = (m_1 + m_2)v$$

or, since $u_2 = 0$,

$$(0.012\ \text{kg})u_1 = (0.012\ \text{kg} + 2\ \text{kg})(1.4\ \text{m/sec})$$
$$(0.012\ \text{kg})u_1 = (2.012\ \text{kg})(1.4\ \text{m/sec})$$
$$0.012u_1 = 2.82\ \text{m/sec}$$

which gives an entrance velocity of

$$u_1 = 235\ \text{m/sec}$$

**To simulate the JFK head snap, a block of wood equaling the weight of assumed head mass should be suspended on two long strong wire cables for stability to prevent spinning of the block and shot with a Carcano 160gr bullet at 2000 ft/sec or similar bullet and measure both the height of displacement and horizontal displacement. This experiment proves the head snap to be the result of a frontal shot to the head if a bullet can move the assumed head neck mass block a distance of one foot horizontally. The so-called, Luis Alvarez "jet effect" theory of a rear entry with ejected brain causing a reward head snap is fiction. Construct the block of wood so that the bullet penetrates 3 to 4 inches and exits instead of stopping the bullet then repeat the experiment. Or since the JFK bullets exited after delivering about a 1000 foot-pounds try the test with a pistol bullet delivering about 1000 foot-** Fiction

ONE & ONLY ONE BONE

[illegible] IS RIGHT

PARIETAL BONE

**pounds of total energy without exiting. Does the block move one foot horizontally?**

**1 gram = 15.432 grains** **160 grains = 10.4 grams** **1 grain = .065 gram**

**9.8 m/sec$^2$ = 32 ft/sec$^2$** **speed of gravity**

**1 m/sec = 3.3 ft/sec** **2000 ft/sec = 606 m/sec**

NOT OCCIPITAL

## HARPER FRAGMENT

**Dr. Mantik has done excellent work on the autopsy x-rays however, Murder in Dealey Plaza p 279-282, 226 Figure 2A, incorrectly identifies the Harper fragment as being three bones, left and right parietal and occipital. Dr. Mantik's courage and speculation has thus produced the following discussion, which adds to the overall understanding of the events of November 22, 1963 to which I commend him but I must disagree with his findings. If the Harper fragment were three bones it would mean that the Lambda, the junction of the two lambdoid sutures and the saggital suture, is present on the Harper fragment. The Lambda is such a major landmark that it is doubtful that the Dallas Drs. would have omitted it from their news media discussions as to its possible orgin. The Drs. have never said on public record that the fragment contained any suture lines. [In fact, I recall hearing audio news reports of them denying the existence of any suture lines but I have not been able to locate a recorded source to prove the point.] The fact is that the Harper fragment is one and only one bone because it contains no suture lines. I have examined the photos and no suture lines are present within the Harper fragment. The color photos of the Harper fragment show area "F" Fig. 2A p 226, as bright white indicating freshly fractured bone. The dividing line between area F and GE is a split-thickness fracture line of outward beveling thus the fracture is not seen on the inner surface. Area F is a few mm lower than the other areas due to the sloping beveling fracture. A side view would clearly show this slope starting at the dark periosteum edge and ending at the outer edge of the internal surface. Optical density in an x-ray would also show this in addition to any bullet metal fragments or lead marks but no x-rays were taken of the Harper fragment. Live bone is covered with a membrane called the periosteum and it is seen as dry "blood" in areas E and G but not F. Haversian canals occur in bone surrounding nerves and blood vessels and they are exposed only when the bone is fractured. Area F shows exposed round openings to the canals not seen in areas E and G. The dividing line between E and G is not discernable in the photos. Area E is darker than G but no suture line is present and this is due to different levels of dry blood on the periosteum. Fact: Suture lines if present on the outer surface would also be present on the inner surface. No suture lines are seen on the inner surface in 2B. Photo F8, as I orient it, shows the occipital bone almost fully intact thus the Harper fragment is not occipital and it could not be located as depicted by Dr. Mantik. Given the amount of missing right parietal bone from the x-rays the Harper fragment is most probably right parietal bone. The Dallas Drs. were most uncertain as to the possible origin of the Harper fragment and guessed that it was occipital. Without the skull it is very difficult to place this fragment. The Harper fragment appears flat without any of the expected cupping and curvature of inner occipital bone thus it is probably parietal. The Dallas Drs.' positioning of it may have been influenced more by reports of the shooting than by anatomy. Due to the so-called "lead" on the bone, I**

[illegible] WRONG IN IDENTIF. OF HARPER FRAGMENT

ASK GARY MACK IF HE CAN GET VIDEO OF THIS DENIAL

FRACTURE LINE OF OUTWARD BEVELING → LINE

DR. R. ROBERTSON IF HE AGREE?

HARPER → PARIETAL OR OCCIPITAL ??

Dallas Doctors → INFLUENCED BY NOT ANATOMY BUT NEWS REPORTS OF WHERE SHOTS CAME FROM!

X DALLAS DOCTORS GUESSED OCCIPITAL

XXX MORE EVIDENCE THAT BACK OF HEAD WAS NOT BLOWN OUT - !!

XX !! MOST PROBABLY RIGHT PARIETAL BONE

THUS HARPER FRAGMENT IS NOT OCCIPITAL BUT PARIETAL suspect that it was located near the .45 cal. entry in the right parietal area. In all probability this "lead mark" was copper or gray dirt from a copper jacketed bullet as it passed. The beveling at the lead mark appears more inward but outward beveling is also present thus the direction of the bullet cannot be determined from the Harper fragment alone. No testing has ever been reported and the fragment has disappeared. Dr. Mantik's experiments with medically prepared skulls and simulated brain tissue transmitting dye are interesting. Medically prepared skulls have been boiled in water for hours thus removing the periosteum and all soft tissues including most connective tissues between the suture lines. A comparison between dye transference along suture lines in medically prepared skulls and unprepared skulls cannot be valid. I respect Dr. Mantik's hypothetical thinking here but I would insist upon a study using blood and unprepared skulls with the periosteum and soft tissues intact before drawing any conclusions as to dye or blood transference along suture lines. Live bone is 100% saturated with fluids. Osmotic pressure thus would not readily transmit blood fluids from one side to the other as would dry bone. Red blood cells are probably too large to pass across a suture line even in prepared skulls. The periosteum would prevent blood cells from passing in live skulls. The Harper fragment was blown clear of JFK with only a thin coat of blood on periosteum which immediately began to clot and dry. The blood would clot and dry in about 5 minutes thus no transference could occur.

LEAD MARK
BEVELING
↓
NOTED
OFF
THE
RECORD
[illegible]

HSCA
DOCTORS
— COE
— BADEN
— LOQUVAM

X X →

Dr. Mantik has incorrectly oriented F8 and has failed to locate the occipital protuberance, page 293, Murder in Dealey Plaza. Point "A" is almost correctly located over the nose but point "B" [under the Dr's fingers] is incorrectly located at about the right mastoid process behind the ear. This is a distance of about 3 inches from the occipital protuberance. Using his line AB about a 20° angle downward from point "A" will intersect the occipital protuberance correcting the error. This error occurred because all the Drs. have overlooked the neck rest supporting the head because it is in dark shadow. The neck rest is very difficult to identify without multiple contrasting photos printed light and dark. The base of the skull is then outlined as it overhangs the neck rest. The glass object on the left is a jar.

X

↓
DIRECTION
OF
BULLET
CANNOT
BE
DETERMINED
BY
BEVELING
↓
BUT IT
MAKES
SENSE
TO
ME THAT
DIRECTION
IS
EXACTLY
WHAT
WAS DISCUSSED

Y

What Dr. Mantik labels as bone fragments C and D in F8, p 292, is actually scalp tissue with hair. This is part of the skin flap that turns the right temple semicircle in F1 into a complete circle of white light in F8. Follow the skin edge from the ruler to points C and D. Perhaps he is referring to an approximate location of the bone fragments given his interpretation of the photo. The bone fragments are not present in this photo F8. If they were bone fragments they have no visible support from the force of gravity unless attached to the skin, which is very doubtful. The x-rays were taken before the autopsy while F8 was taken during the autopsy thus they represent different body positions.

X-RAYS
& PHOTOS
↓
TAKEN
AT
DIFF
TIME

Dr. Mantik has failed to discuss the ballistic wounds depicted in F8. Specifically: the right temple white circle and the skin tear and bone semicircle with outward beveling and the dried blood on the bone and the skin bruising and the concentric circles of the .45 cal wound near the ruler and of course the low occipital Parkland wound which is very difficult to see. Dr. Mantik has failed to correlate these wounds with the corresponding wounds in the other autopsy photos. I would welcome any comments from any Doctor or professional expert concerning the four

→ VERIFIED AT CANCER CONF NOV. 2002
AS I COMMENTED ON
THE SPECTER – O'CONNOR, ETC VIDEO

OUTWARD BEVELING

**these wounds with the corresponding wounds in the other autopsy photos. I would welcome any comments from any Doctor or professional expert concerning the four bullet wounds as I have identified them in the autopsy photos.**

## CONCLUSIONS OF THE STUDY

**This study of the autopsy photos finds that JFK was shot FOUR times from the right front by at least three different guns none of which were fired from the Sixth Floor School Book Depository. All four of these wounds can be duplicated using cadavers. Actual corner's reports and photos of gunshot victims will confirm these ballistic results of this study.**

**This means, Oswald did not shoot JFK, but if he was shooting from the Sixth Floor, one of his shots hit Connally in the back, as proven by the medical report, and probably caused all of his injuries and the damage to the windshield and all the fragments recovered in the car. One of Oswald's shots missed the car hitting a curb and wounding Tague as proven by the photos of his injury. The other shot missed and is unknown other than Sheriff Decker and others report seeing a shot hit the pavement in front or near JFK's car. It is possible but not probable that this shot also hit Connally's wrist and accounts for some fragments.** ? **This accounting of Oswald's possible three shots corresponds very well with Oswald's known shooting scores and the condition of the Carcano rifle found and the known evidence. This means that someone probably planted CE 399 the magic bullet found at Parkland and Jack Ruby was seen at Parkland after the assassination.**

## SIGNIFICANCE OF THIS STUDY

**A finding of FOUR shots hitting JFK from the right front by at least three different guns proves a conspiracy existed. Oswald also fired three additional shots one of which struck Connally in the back without hitting JFK thus creating confusion. At least seven bullets were fired November 22, 1963. Given Oswald's shooting record and the condition of the Carcano it is clear that Oswald was never intended to actually shoot JFK or even hit the car. Oswald was intended as a patsy to divert attention away from the true assassins by blaming Russia or Cuba. The lone nut gunman was a possible cover story but only if the evidence could be controlled and suppressed. Steps were taken to control news media, witnesses and physical evidence on the first day shaping the lone nut three shots myth. If the myth failed for any reason the primary cover story would be that Oswald was working as a communist agent with others. JFK's body was not stolen and no surgery was performed to hide bullet wounds. On Friday night a full complete competent autopsy was performed in preparation of being used at Oswald's trial.** ??? **The autopsy found the four bullet wounds from the right front as described above. The Kennedy family was informed of the findings as was President Johnson and Hover of the FBI but orders for secrecy were given to all others in the interest of national security. On Sunday Oswald was killed. A decision was made by Johnson, Hover, and the Kennedy family to blame the dead Oswald as the single lone nut instead of having him a conspirator and a communist agent with others still at large. This was done**

**for national security reasons primarily to prevent war with Russia or public unrest or to conceal Robert Kennedy's involvement with the ZR-rifle program to kill Castro. It is believed by many that the ZR-rifle team actually fired the shots that killed JFK. The Kennedy family permitted the cover up to occur and continue for some unknown reason. By doing so the family has ensured JFK's place in history by the ongoing mystery of the assassination and conspiracy theories. This maybe the most compelling reason for the Kennedy's. The Kennedy family silence ensured the election of Johnson where a public announcement of conspiracy would have lost the election to the Republicans. After Oswald's death Dr. Humes burns the original autopsy report and his notes. A multitude of evidence is destroyed, lost, altered and fabricated. Once commenced the cover up cannot fail. Johnson wants to win the election and any hint of conspiracy and cover up would permit the people to suspect his involvement in the assassination since he became president. The Kennedy's remain silent permitting Johnson to be elected. To this day the Kennedy's still remain silent instead of demanding justice and that the truth be known. Jackie Kennedy left some secret~~e~~ papers to be opened only after the death of all her children. Perhaps she will tell us what really happened and why.**

**Remember the wound locations:**

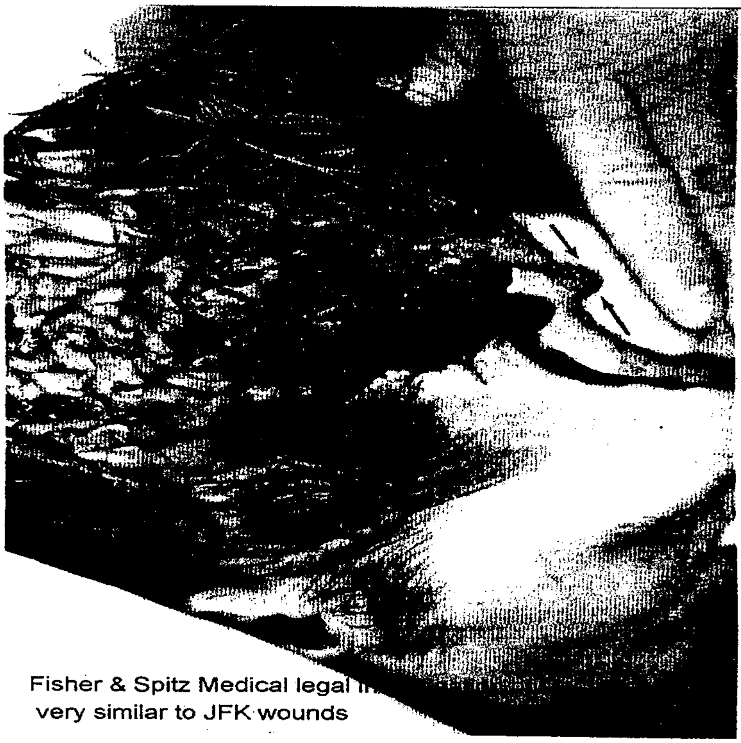
**#1. Crown area 4" above the occipital protuberance exit wound.**
**#2. Right of the occipital protuberance both an entry and exit wound.**
**#3. Right parietal entry wound.**
**#4. Right temple entry wound.**

**The big lie is a propaganda technique used by Hitler. Tell the lie as often as possible and the bigger the lie the more believable it becomes. It is politics, public relations or "spin." Have the lie supported by public officials and scientists. When all reports simply repeat the lie then the lie becomes the public perception of truth regardless of the true facts of reality. The Warren commission did not know nor seek the truth. They were in place to establish the lie of a single shooter and no others. The autopsy Drs. knew the truth and were ordered to lie thus the evidence had to be destroyed, altered and sealed to prevent discovery. The occipital Parkland wound #2 was quickly chosen to become the rear entry since it is half true and the autopsy Drs. never changed its location in the investigations. The right temple #4 became an exit, as did the right parietal #3. The Clark panel and HSCA could not locate the occipital wound #2 in the surviving photos because it is in shadow but found the crown area red spot wound #1 and call it an entry. Thus, the conflict of the moving back of the head wound was created.**

**Notice the tactics: entry becomes exit and exit becomes entry but because there are four wounds to be caused by only one Oswald bullet, one of the wounds must be ignored. Bullets absolutely positively do not divide into perfectly round parts causing perfectly round skin exits in the skull. In F8 the .45 and the white circle wounds #3 and #4 are round and cannot be exit wounds. This is the big lie and how it was told. The Warren Commission held secret~~e~~ meetings allowing only questions that supported the lone nut theory. A news media blackout was imposed however only leaks of the lone nut theory occurred during the nine months thus**

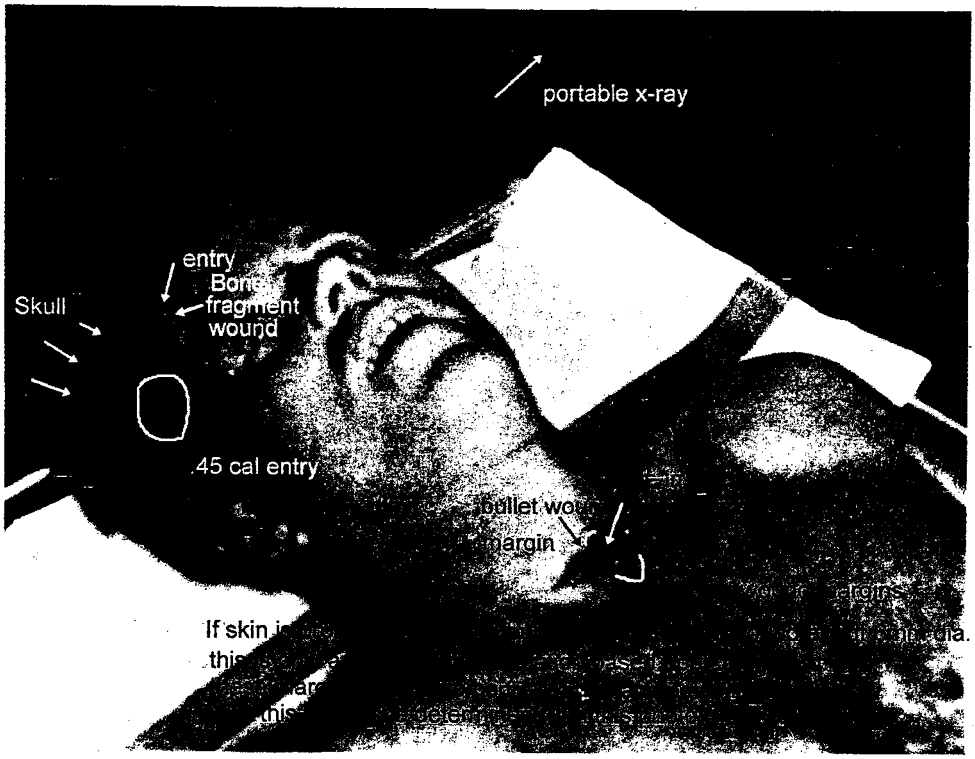
**conditioning the public to accept it. There was no public or Kennedy family outcry demanding a search for conspirators. Then just before the election the lone nut theory became the final official report and Johnson was elected. Without the autopsy photos no one could dispute the official autopsy report thus all conspiracy theories were publicly dismissed as unsupported by the evidence.**

**You now know the truth about how JFK was killed and the cover-up. Contact your county corner to confirm any of these findings. Perform your own ballistic experiments. Contact your elected officials and demand that JFK be exhumed for a new autopsy. Nothing will happen to resolve the assassination until a multitude of corners come forward supporting these findings with documented gunshot victim reports and photos and experimental ballistic reports. Only a pubic outcry will make this happen. The Kennedy family continues to restrict access to the autopsy photos in the archives. This study needs to be repeated upon the original photos in the archives. Petition the Kennedy family to permit a repeat of study to be conducted by several experts including myself. Be careful of researchers who would discredit the evidence such as the autopsy photos or the Zapruder film as being faked or tampered with because the government does not want you to believe your own eyes when examining it.**

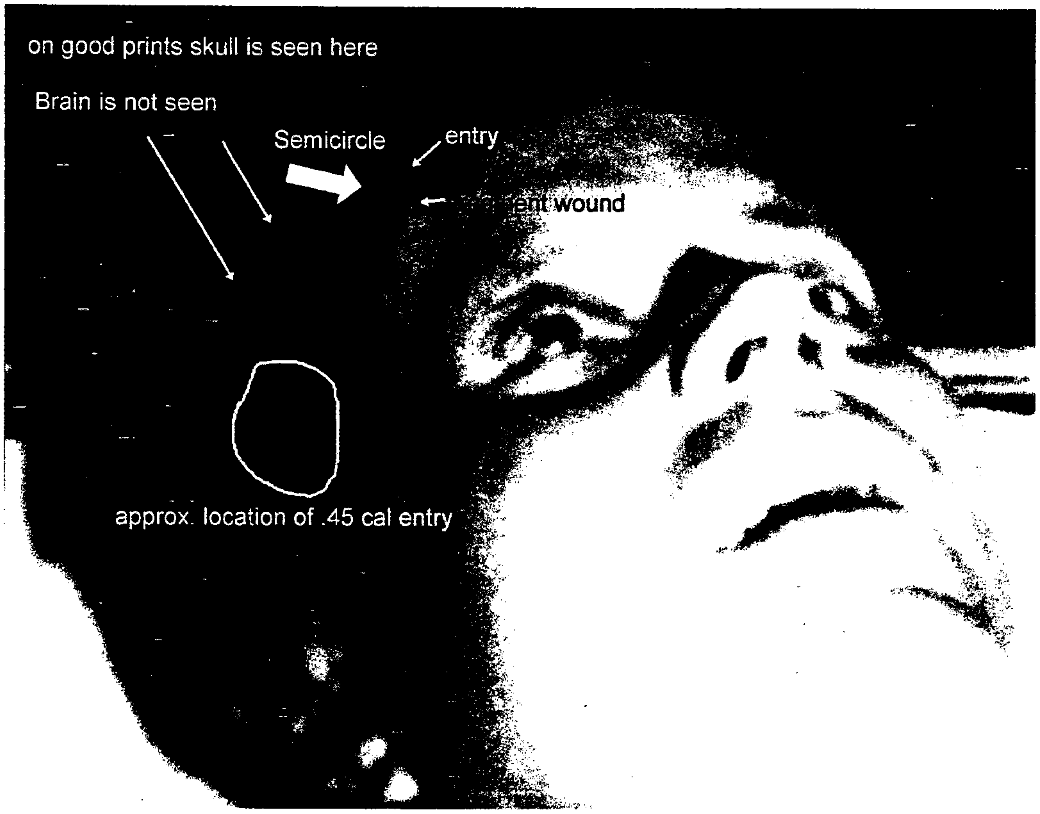


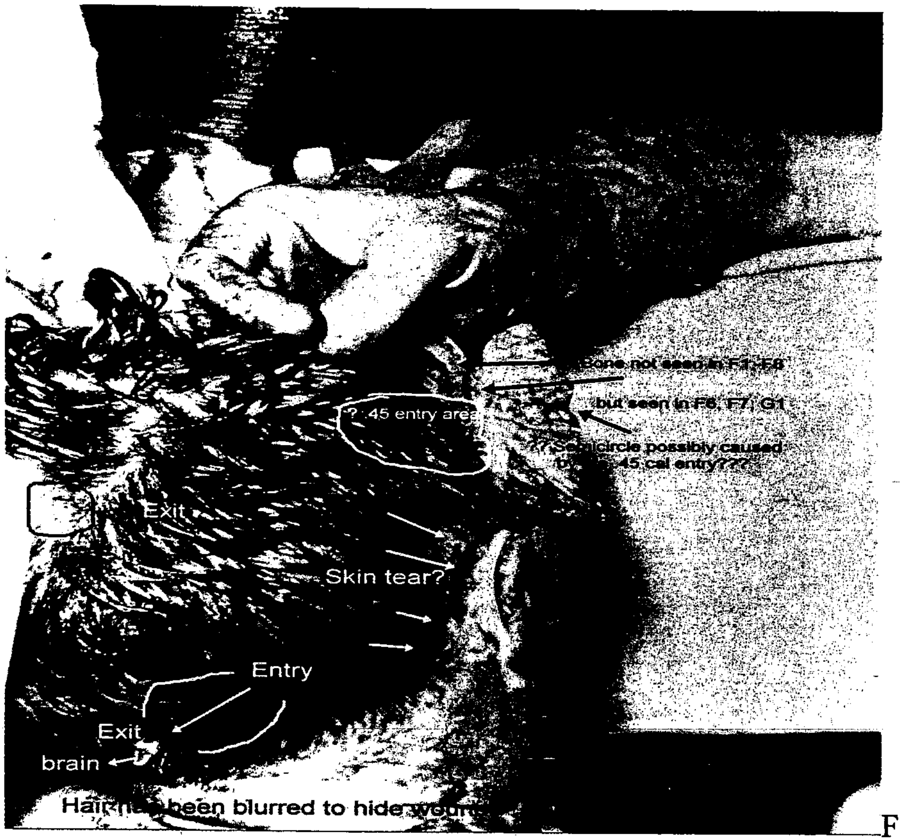
Fisher & Spitz Medical legal
very similar to JFK wounds

FIGURE X-28. Shot from a 30-30 rifle, fired from a distance of about 60 ft. The wound of entrance is indicated by arrows

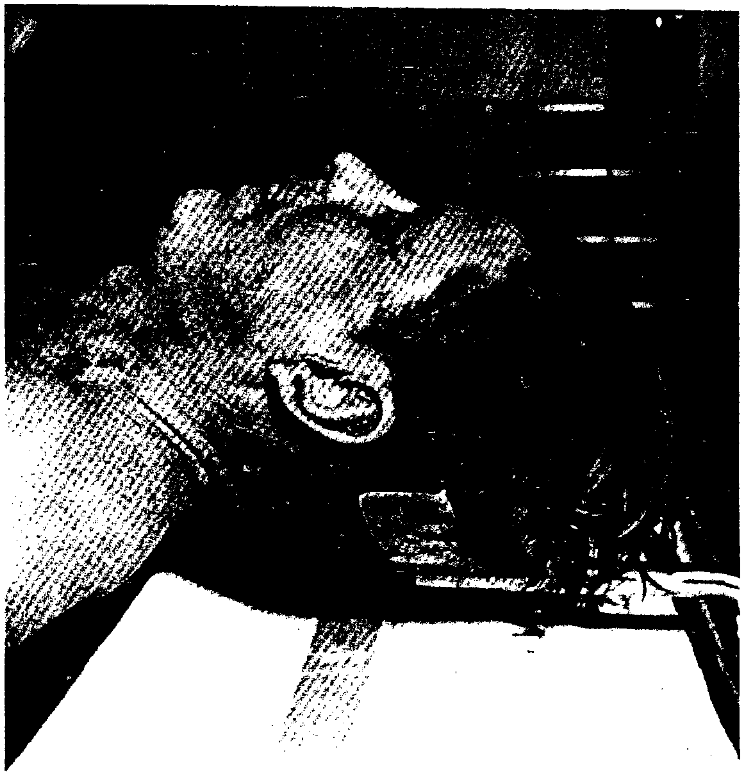

portable x-ray
entry
Bone fragment wound
Skull
.45 cal entry
bullet wou
margin
If skin i
this
this

F1

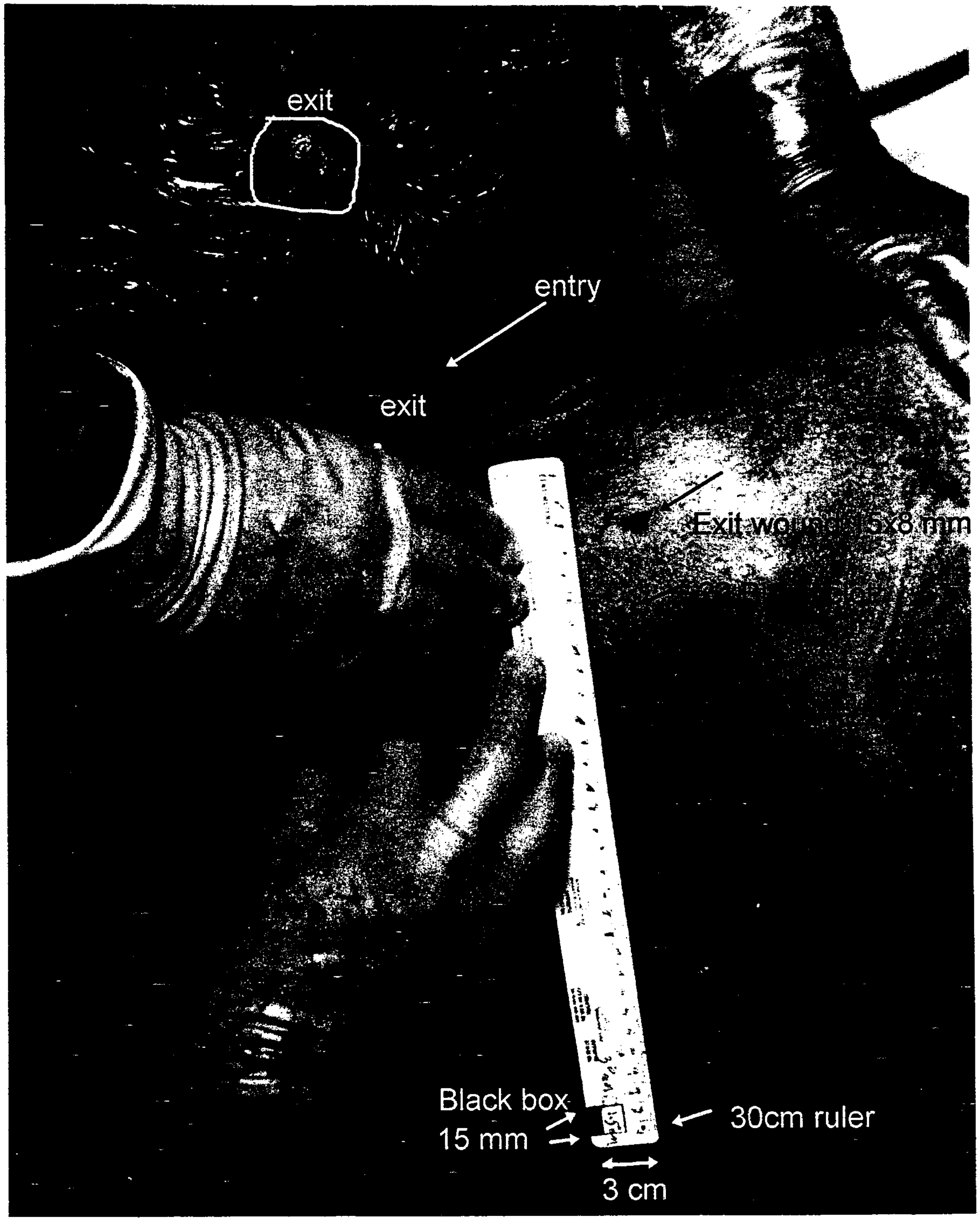

on good prints skull is seen here
Brain is not seen
Semicircle
entry
ent wound
approx. location of .45 cal entry



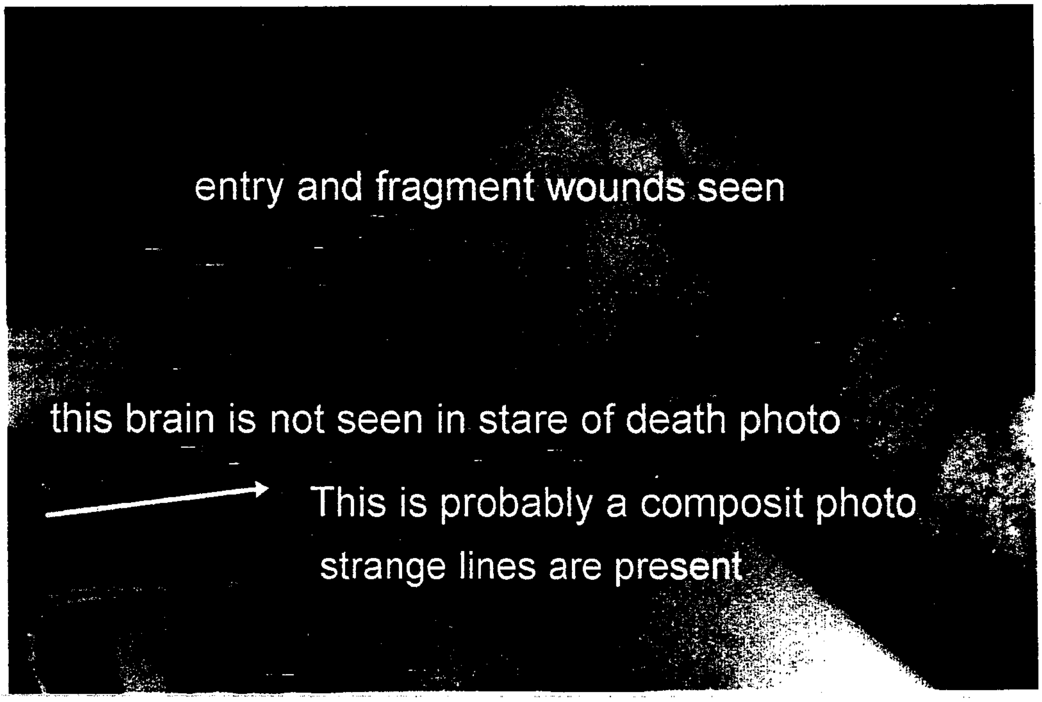
F3



The Left Profile (F4)


exit
entry
exit
Exit wound 15x8 mm
Black box
15 mm
30cm ruler
3 cm

F5



entry and fragment wounds seen

this brain is not seen in stare of death photo

This is probably a composit photo

strange lines are present

*Right side of the head—there is no damage to the face as shown in the X-ray, and no damage to the back of the head. This picture is completely incompatible with the X-ray of the side of the head.*

*Right side of the head—there is no damage to the face as shown in the X-ray, and no damage to the back of the head. This picture is completely incompatible with the X-ray of the side of the head.*

G1

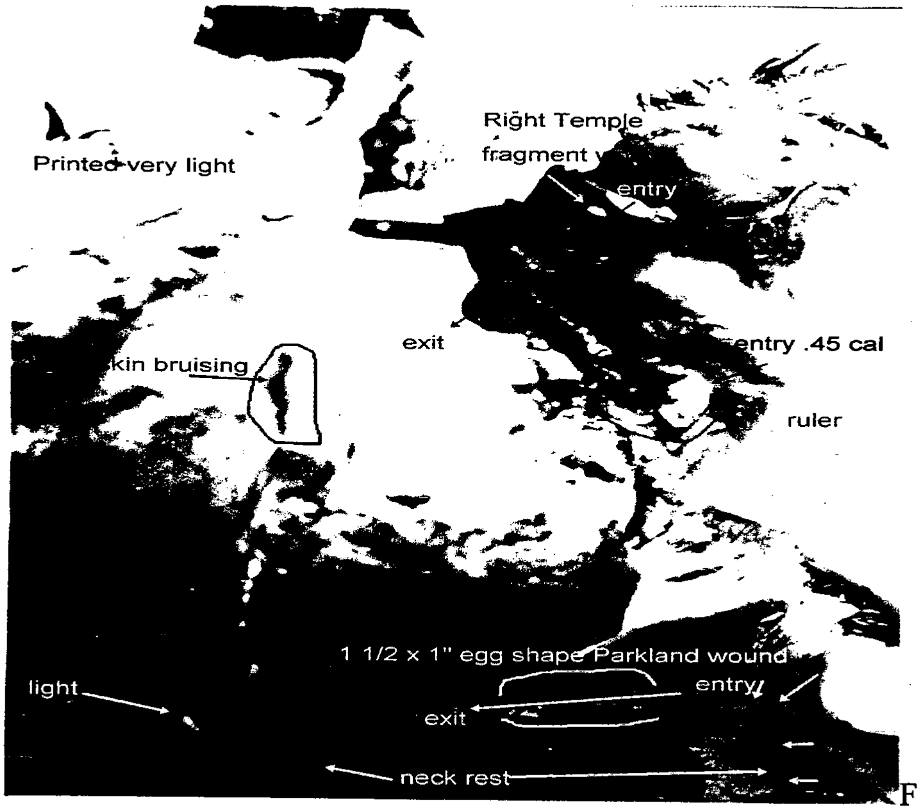
I DISAGREE WITH THE ANALYSIS

HE PROPOSES

③ ENTRY SHOTS TO THE HEAD (FROM KNOLL)

+

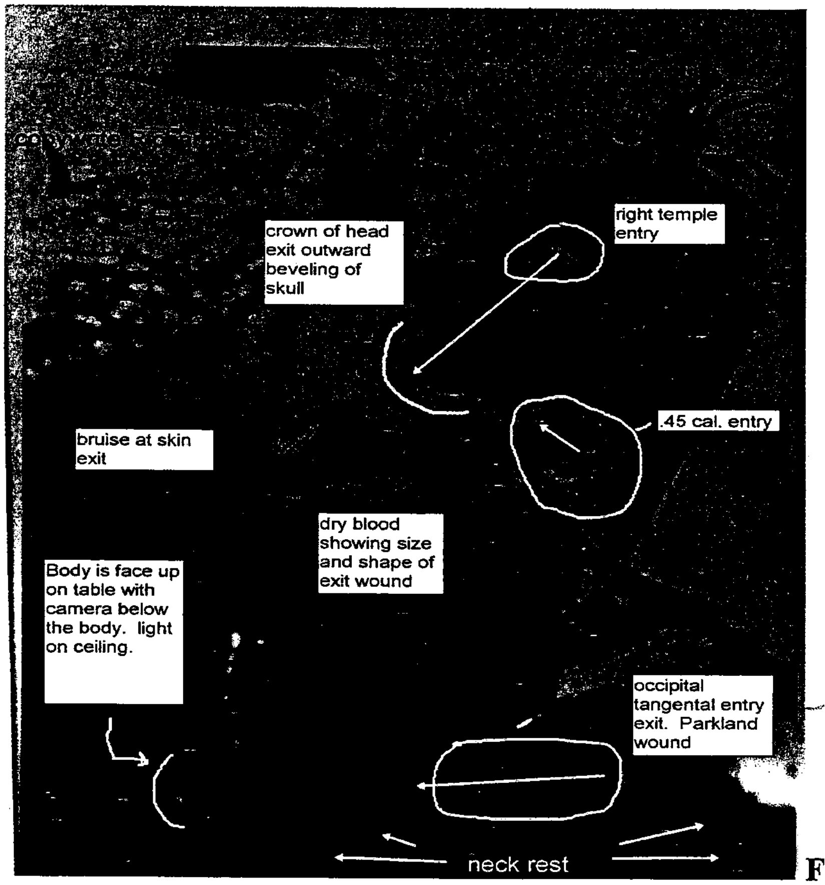
① SHOT (TO NECK) FROM KNOLL



F8

ASK TOBIN

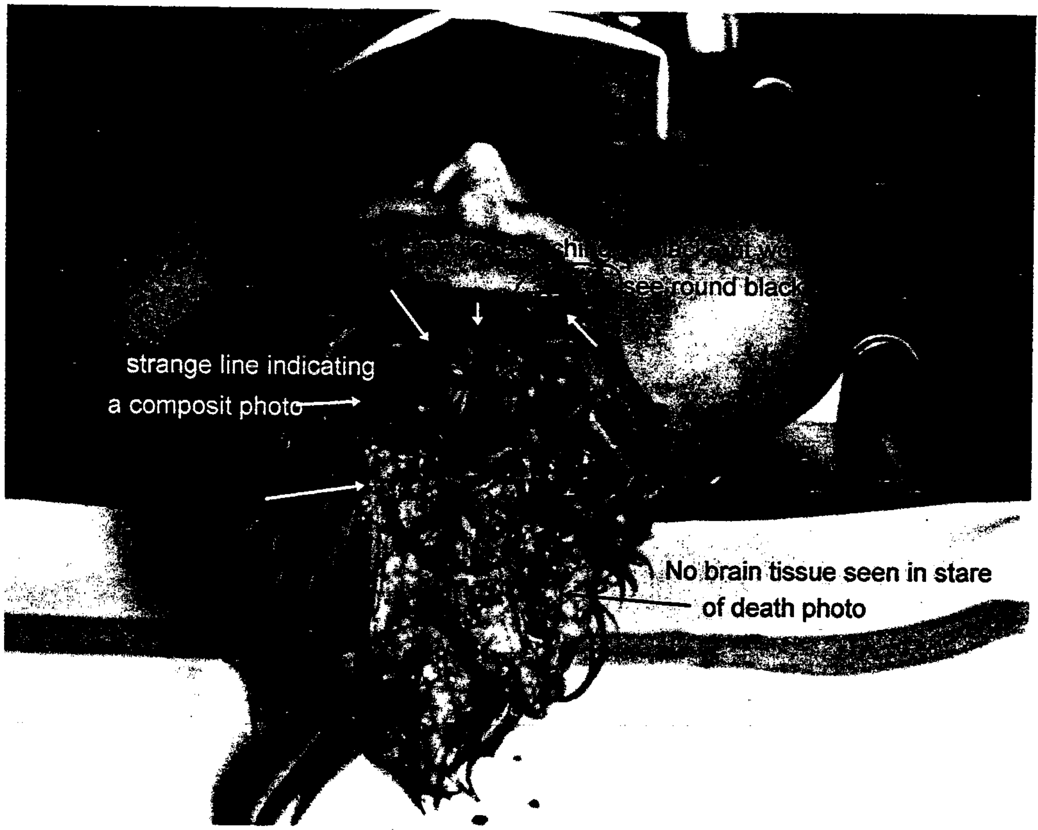
DID THEY USE AN ARMY GRAPHFLEX CAMERA FOR THESE PHOTOS ?


crown of head exit outward beveling of skull
right temple entry
.45 cal. entry
bruise at skin exit
dry blood showing size and shape of exit wound
Body is face up on table with camera below the body. light on ceiling.
occipital tangental entry exit. Parkland wound
neck rest

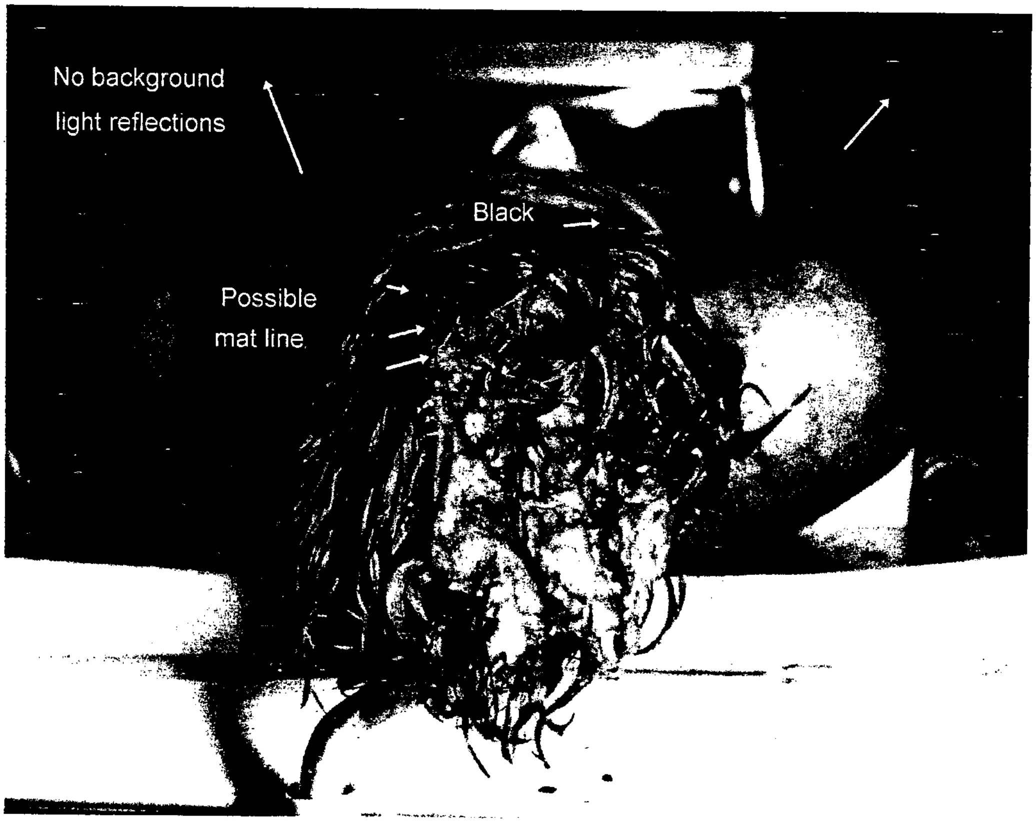
F8

MALCOLM PERRY

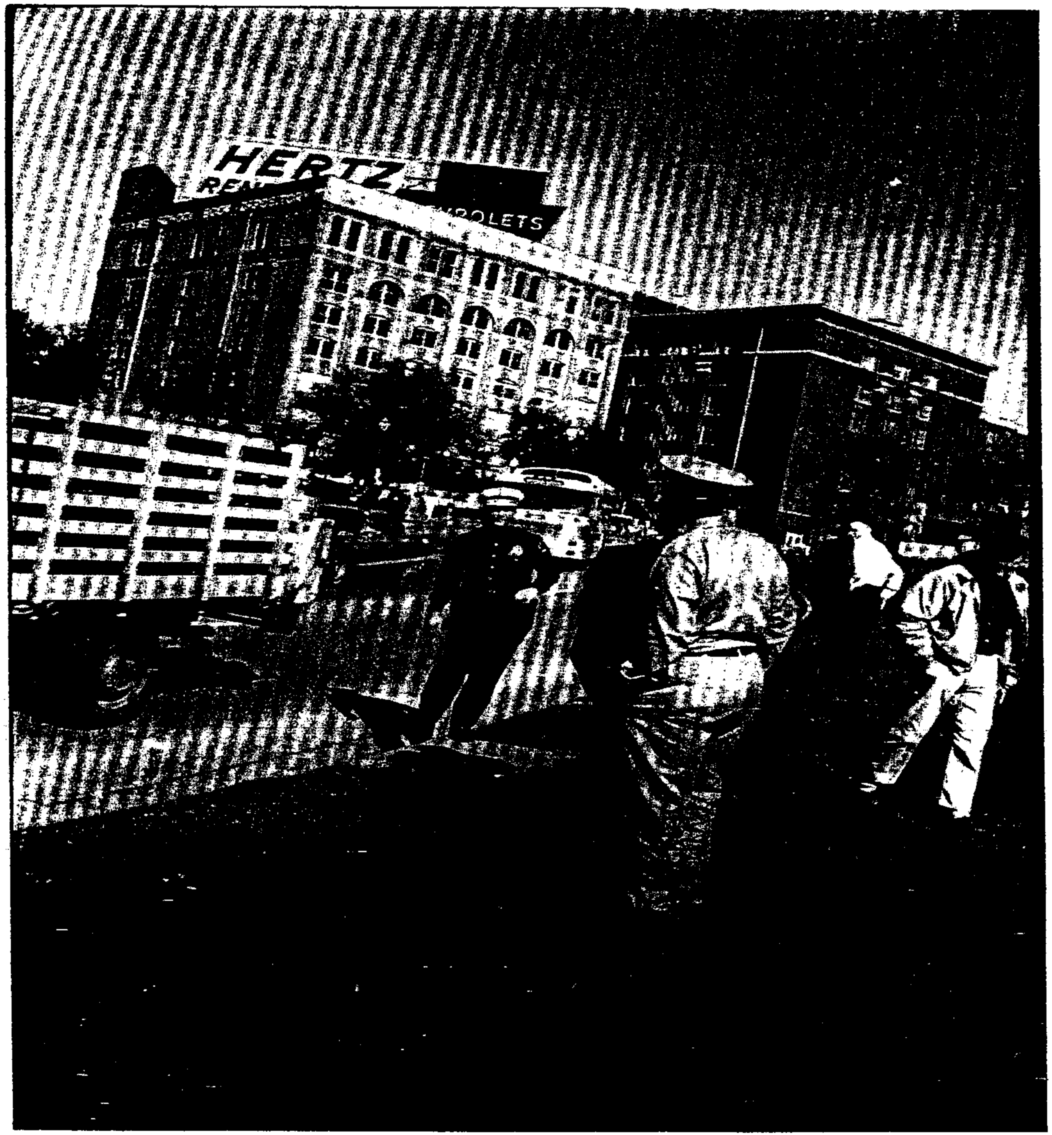
③ ~~SHOT~~ TIMES HE DESCRIBED (FRONTAL) FOR NECK BUT NOT HEAD SHOT(S)


[illegible]
see round black
strange line indicating
a composit photo
No brain tissue seen in stare
of death photo

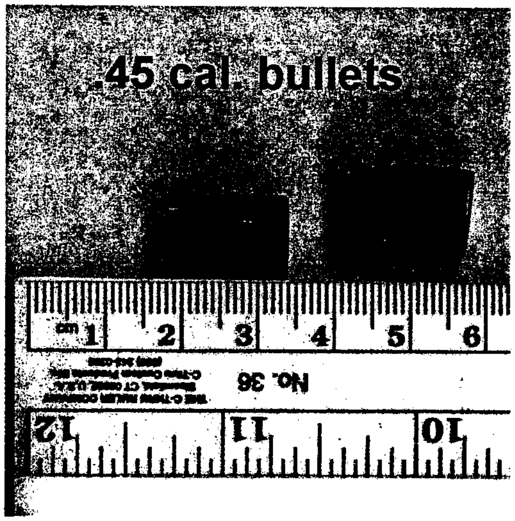
**F6**


No background
light reflections
Black
Possible
mat line

**F7**



*Other civilians stand around the site near the sewer cover, as heavy traffic passes down Elm Street.*



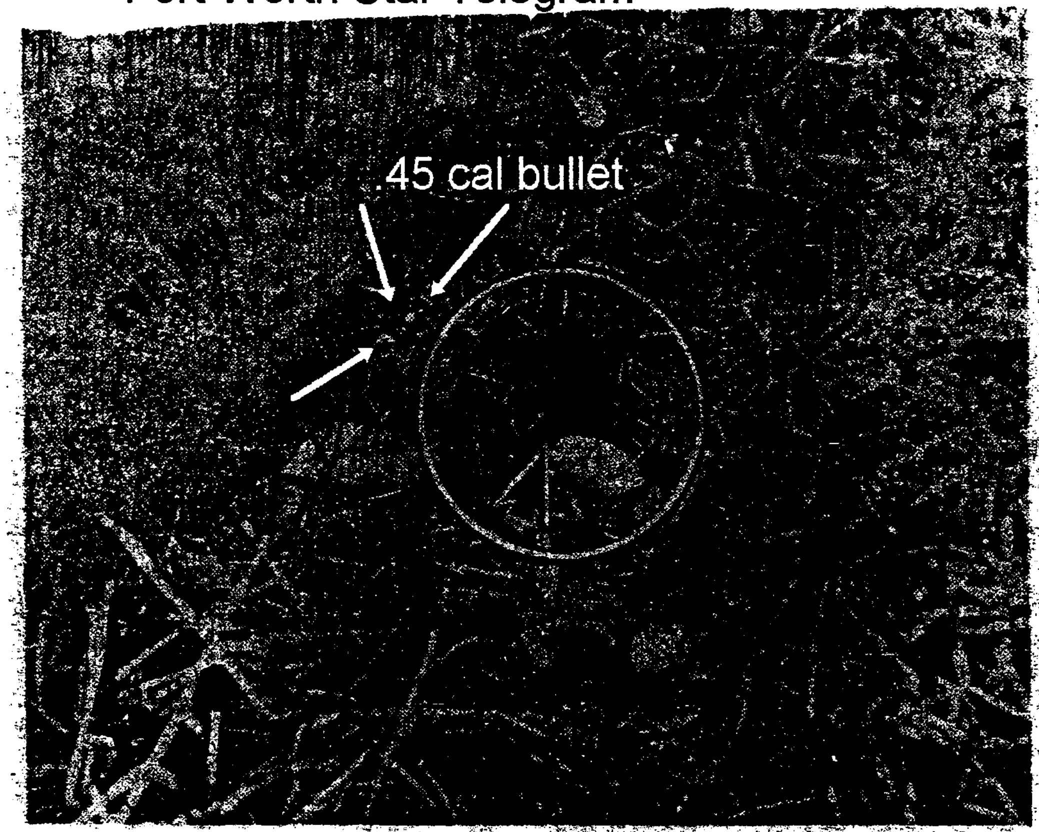
**Examples only and NOT recovered evidence.**

Fort Worth Star Telegram

DATED ??

YES 11/23/63

see next page



—Star-Telegram Photo

**ASSASSIN'S BULLET**—One of the rifle bullets fired by the murderer of President Kennedy lies in the grass across Elm St. from the building in which the killer was hiding and from where he launched his assault.

.45 cal bullet recovered at manhole on the south side of Elm St. according to Rodger Craig.

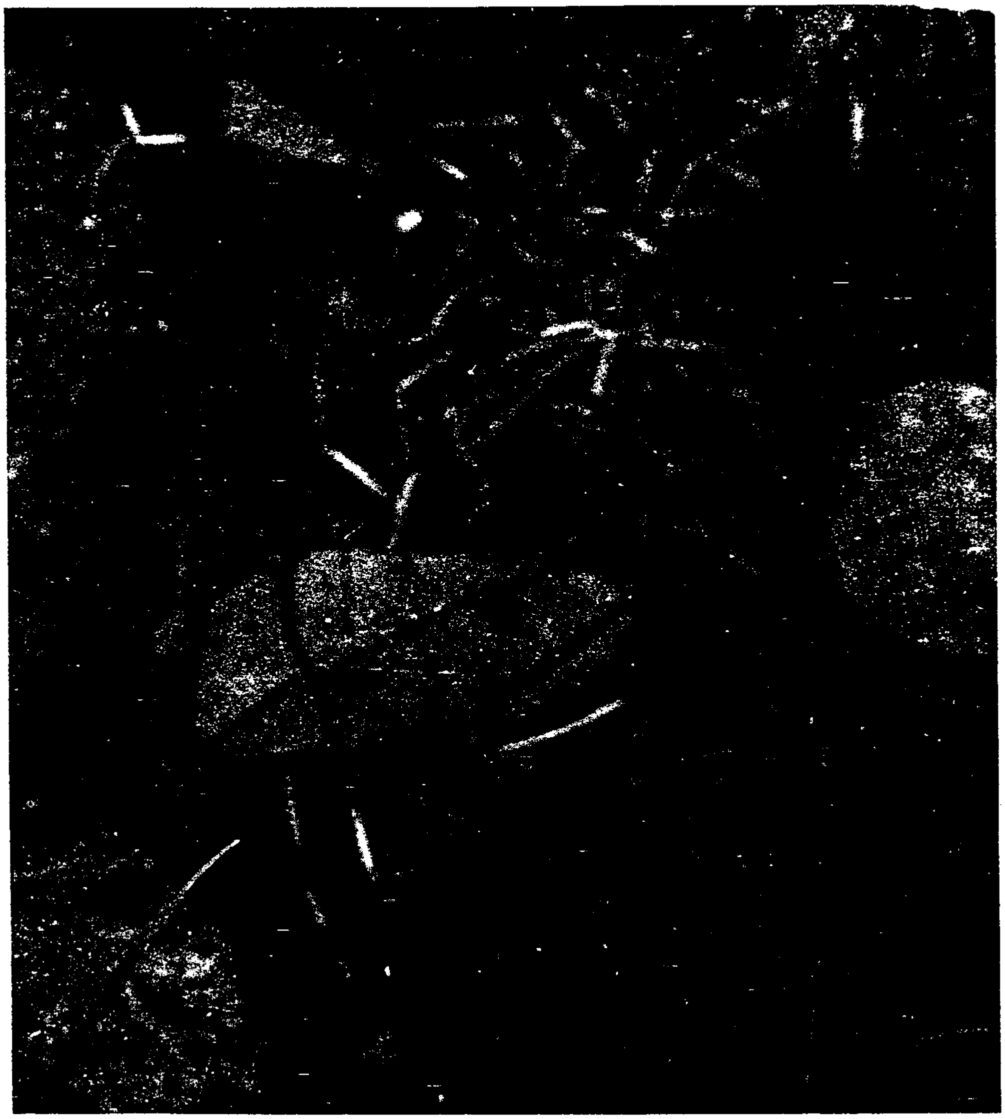
When did Craig say this?

At least 4 photos were taken of the bullet but none are adequate for positive identification.

An object the size and shape of a .45 cal bullet can be seen in the photos.

**The bullet is not circled and the editor incorrectly calls it a rifle bullet.**

**No other discussion of this bullet was made in the newspaper stories. One of the better photographs is attached.**



Blow up of (Pho 36

Fort Worth Star Telegram photo of .45 cal bullet ½ inch below pencil point recovered at manhole. Another photo was printed in the evening edition November 23, 1963 and reproduced above. Only the photo caption was printed to explain this bullet. The story of this bullet was not printed if it was written.

Below page 87 from That Day In Dallas, by Richard B. Trask, an excellent book about the photographers and the pictures they took.

MURRAY — PHOTOGRAPHER

+ WILLIAM ALLEN

JAMES ROBERT JONES — LOCAL DENTIST

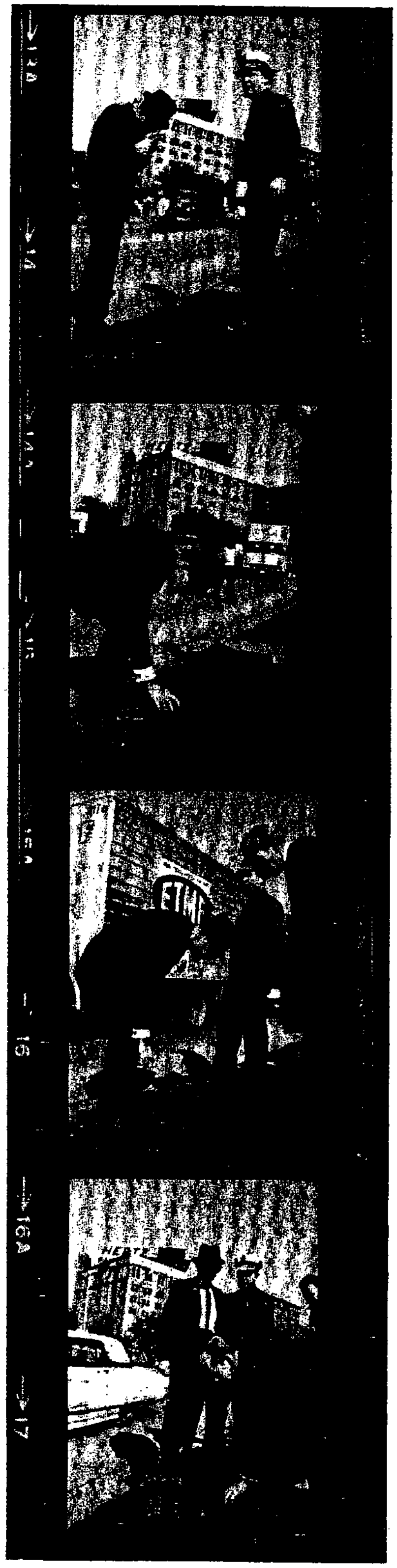
The officer is pointing in the general direction of the Book Depository, the front of which can be seen in the background. A Hertz advertisement sign on the building's roof includes a lighted time-and-temperature indicator which reads "12:39."

Deputy Sheriff Eddy Raymond "Buddy" Walthers is looking toward where Foster is pointing. The man at left peering toward the camera lens is James Robert Jones, a local dentist who had rescheduled his patients for a chance to view the motorcade. His wife and six-year-old son Al had been delayed in driving to the plaza to meet him. Shortly after this photo was made, their car pulled up on Main Street and Dr. Jones ran over to tell them the President had been shot.[7]

Nine minutes ago, upon hearing gunshots, Deputy Sheriff Walthers had run to the railroad yard from his position at the corner of Houston and Main Streets. Just moments ago he had crossed to this location, "... looking at the grass to see if some shots had been fired and some of them might had chugged into this turf here and it would give an indication ... if they were shots and not just blanks or something. ..."

Officer Foster had been stationed on top of the triple underpass. Witnessing the shooting, he believed the shots to have come from the vicinity up around Elm and Houston Streets, and he had moved "... down the roadway there, down to see if I could find where any of the shots hit."[8]

Between 12:39 and 12:40 Murray took a series of seven photos of the activity here [roll 1, #13-19], including Walthers lighting a cigarette, and then stooping over and feeling in the grass. Another man with sandy hair and dressed in a suit is also seen in two frames bending over and probing the area with his left hand. Later, critics of the Warren Commission claimed that a spent bullet had been recovered at this time, citing the interpretation of photographic blow-ups of these Murray prints, as well as a similar series of photos made about the same time by *Dallas Times Herald* photographer William Allen. An article in the



*Contact prints of four of Murray's photos o the sewer cover sequence.*

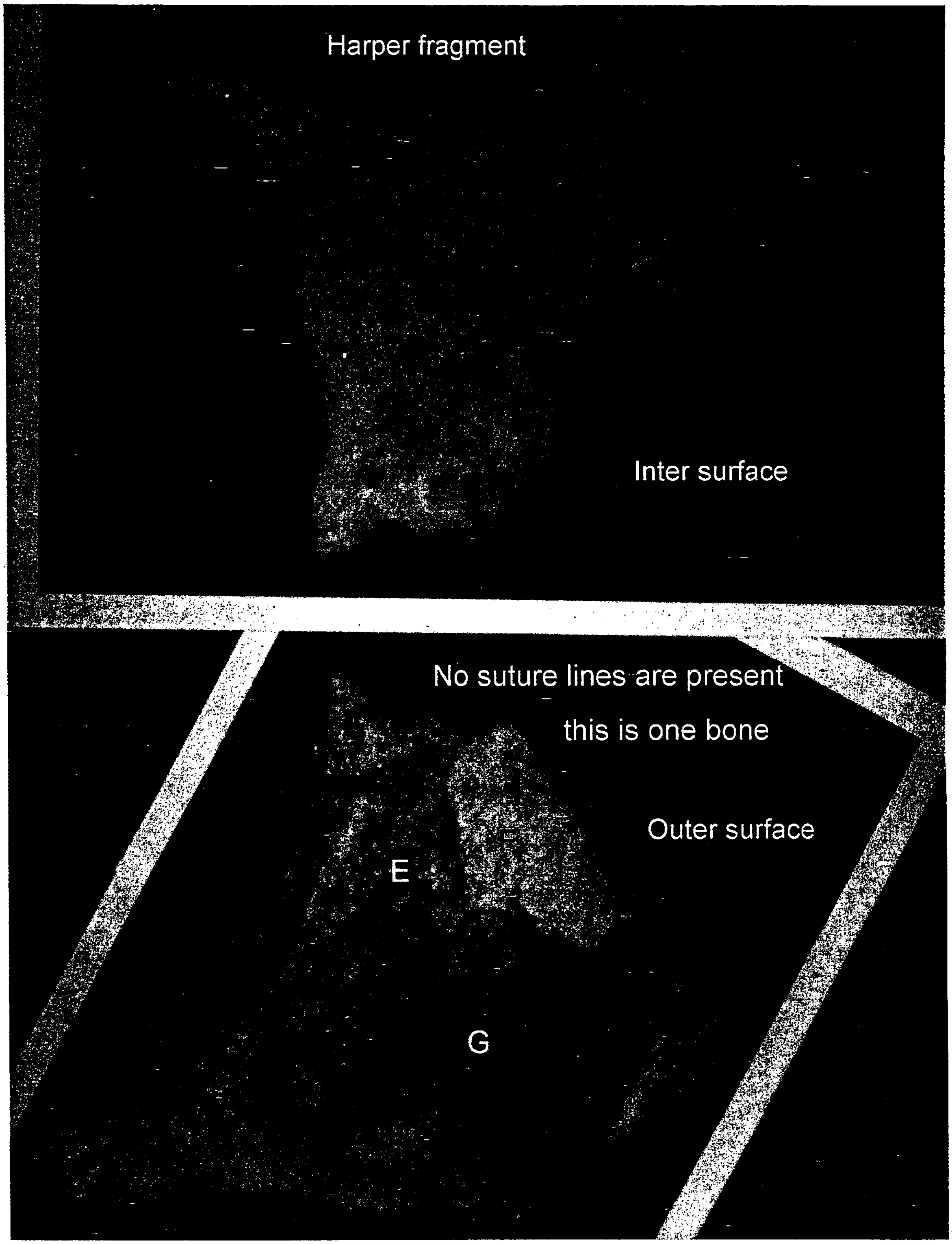
IS THIS PAGE from TRASK BOOK

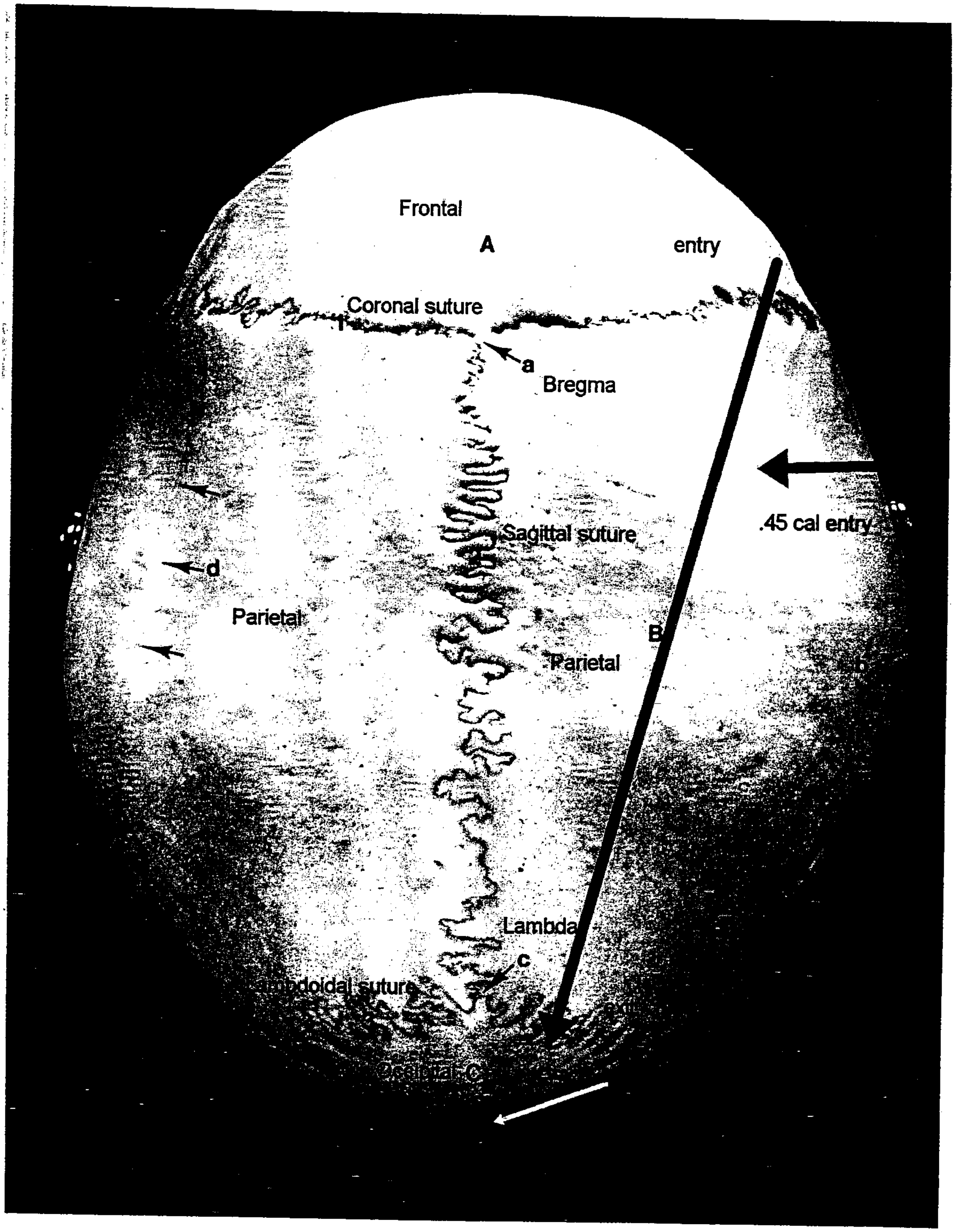
also JAMES ROBERT JONES DENTIST IS NOT IN MY LIST OF WITNESSES

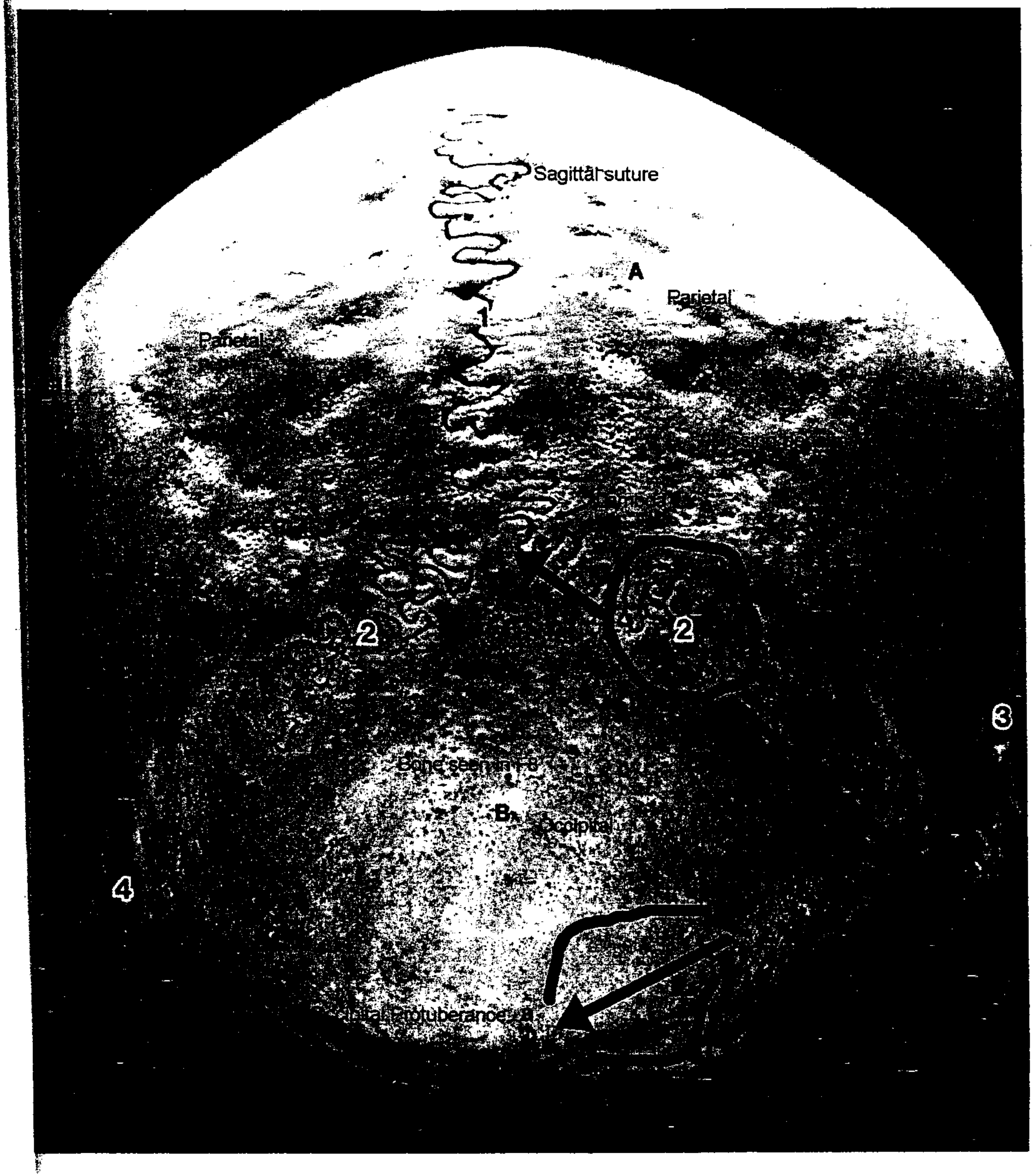
"SANDY HAIR"

see if you can identify him if he is still available

## Harper Fragment

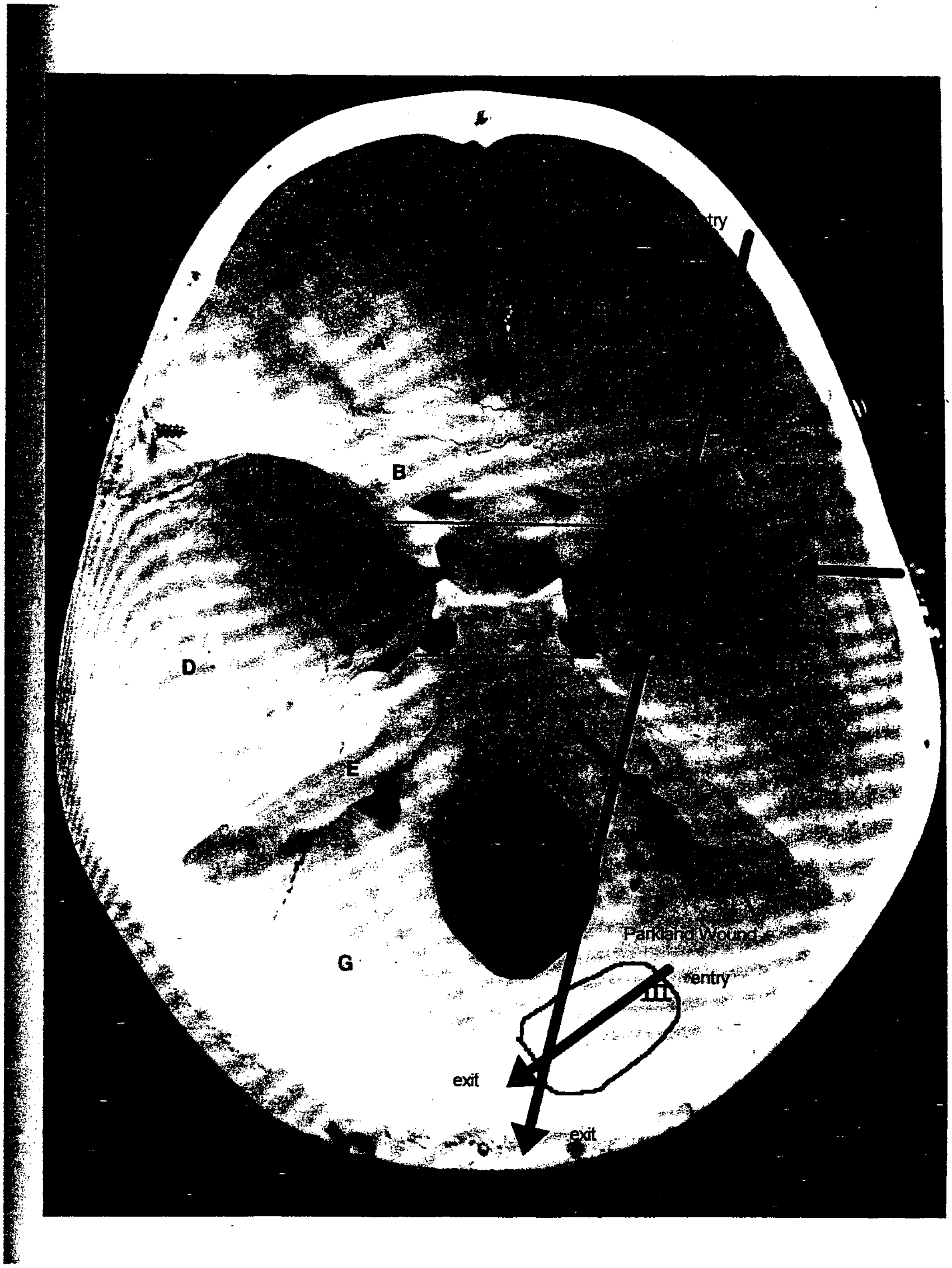


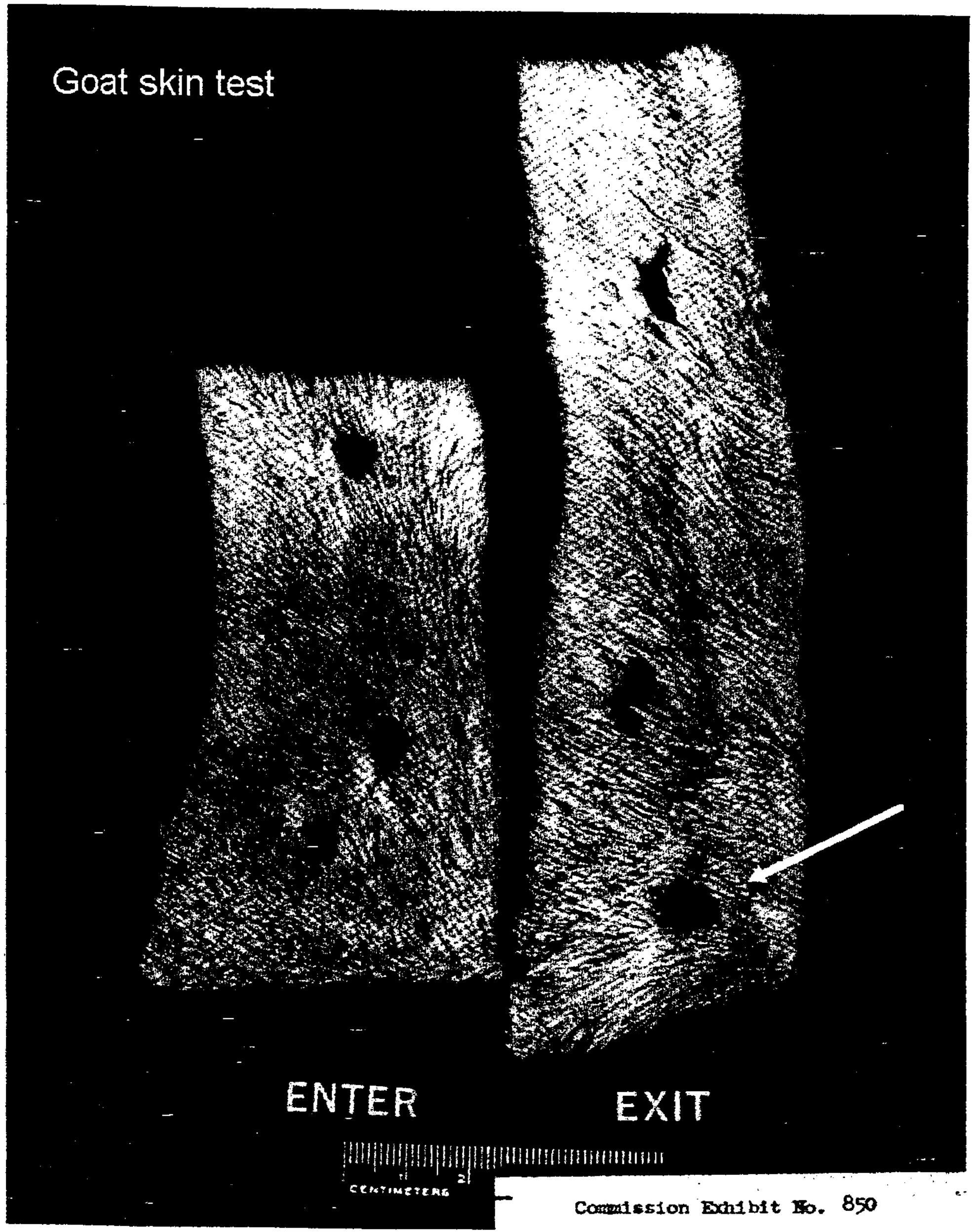

Frontal
A
entry
Coronal suture
a
Bregma
.45 cal entry
Sagittal suture
d
Parietal
B
Parietal
b
Lambda
c
mbdoidal suture
exit
Occipital C



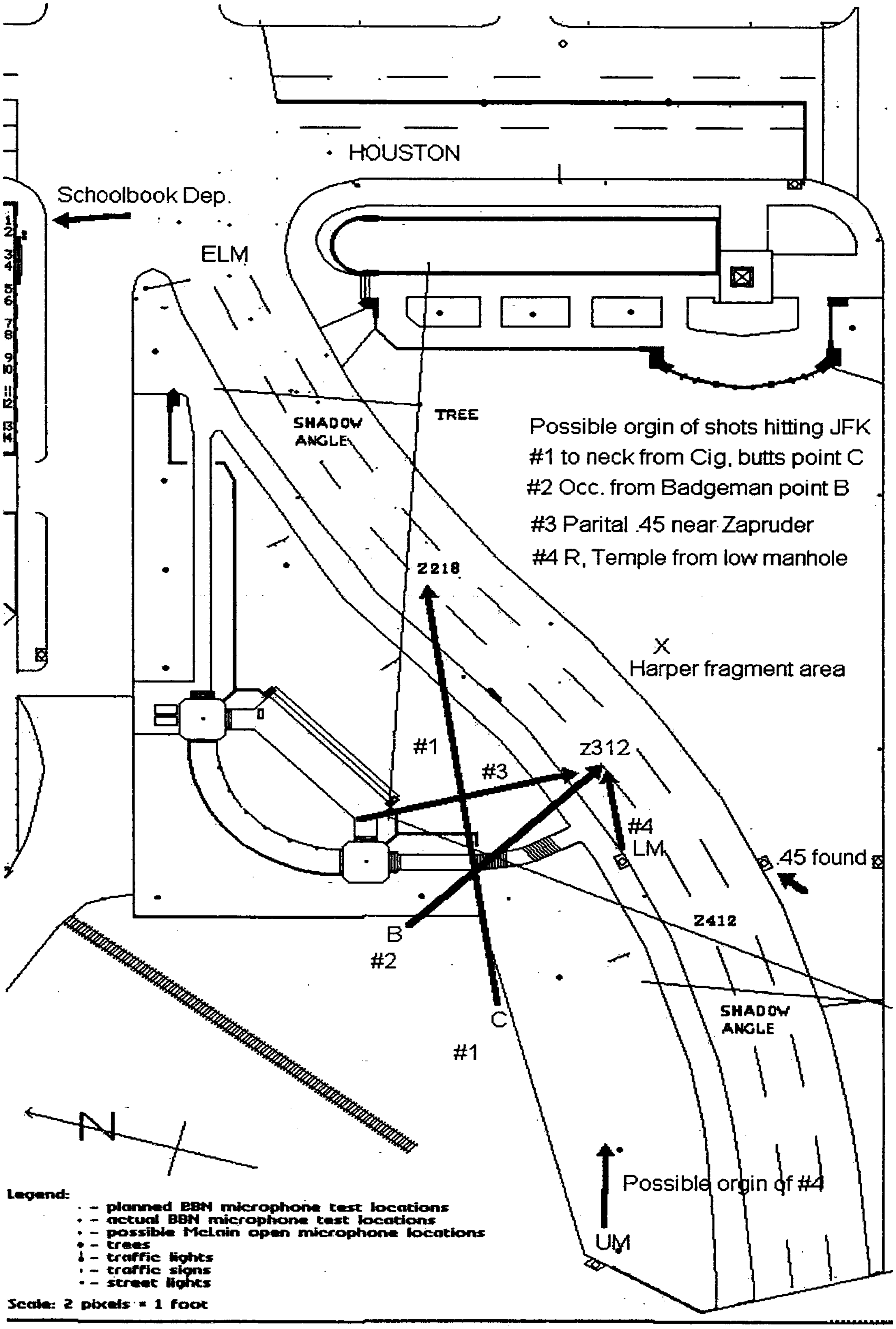
JFK's wounds as located in photo F8

**The autopsy report of an entry about 2 cm to the right of the occipital protuberance is correct but its path and exit are wrong.**


try
A
B
D
E
G
Parkland Wound
entry
III
exit
exit



Warren Commission Exhibit 850, National Archives.


HOUSTON
Schoolbook Dep.
ELM
1 2 3 4 5 6 7 8 9 10 11 12 13 14
SHADOW ANGLE
TREE
Possible orgin of shots hitting JFK
#1 to neck from Cig, butts point C
#2 Occ. from Badgeman point B
#3 Parital .45 near Zapruder
#4 R, Temple from low manhole
Z218
X
Harper fragment area
#1
#3
z312
#4
LM
.45 found
Z412
B
#2
C
#1
SHADOW ANGLE
N
Possible orgin of #4
UM
Legend:
- planned BBN microphone test locations
- actual BBN microphone test locations
- possible McLain open microphone locations
- trees
- traffic lights
- traffic signs
- street lights
Scale: 2 pixels = 1 foot

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